

**Table S5. List of PFAM domains identified in predicted *V. nonalfalae* secretome**

| <b>PFAM description</b>  | <b>PFAM ID</b> | <b>Number of hits</b> |
|--|----------------|-----------------------|
| EFFECTOR-SPECIFIC PFAM   |                | 66                    |
| Calcineurin-like phosphoesterase                                     | PF00149        | 6                     |
| Cerato-platanin  | PF07249        | 2                     |
| CFEM (Common in Fungal Extracellular Membranes) domain               | PF05730        | 13                    |
| Chitin recongnition protein  | PF00187        | 1                     |
| Chitin recongnition protein  | PF03067        | 3                     |
| CVNH (Cyanovirin-N) domain   | PF08881        | 2                     |
| Cysteine-rich secretory protein family                               | PF00188        | 4                     |
| Fungal hydrophobin   | PF06766        | 4                     |
| LysM domain  | PF01476        | 9                     |
| Lytic transglycolase   | PF03330        | 3                     |
| Necrosis inducing protein (NPP1)                                     | PF05630        | 6                     |
| PAN domain   | PF00024        | 1                     |
| Hce2 (Homologs of <i>C. fulvum</i> Ecp2 effector)                    | PF14856        | 5                     |
| Ricin-type beta-trefoil lectin domain                                | PF00652        | 2                     |
| Ser-Thr-rich glycosyl-phosphatidyl-inositol-anchored membrane family | PF10342        | 4                     |
| Thaumatococcus family  | PF00314        | 1                     |
| NO PFAM DOMAIN   |                | 299                   |
| OTHER PFAM DOMAINS   |                | 3132                  |
| [2Fe-2S] binding domain  | PF01799        | 1                     |
| 14-3-3 protein   | PF00244        | 1                     |
| 16S rRNA methyltransferase RsmB/F                                    | PF01189        | 1                     |
| 2Fe-2S iron-sulfur cluster binding domain                            | PF13085        | 2                     |
| 2Fe-2S iron-sulfur cluster binding domain                            | PF00111        | 2                     |
| 2Fe-2S iron-sulfur cluster binding domain                            | PF13510        | 1                     |
| 2OG-Fe(II) oxygenase superfamily                                     | PF13640        | 1                     |
| 2OG-Fe(II) oxygenase superfamily                                     | PF13661        | 1                     |
| 2OG-Fe(II) oxygenase superfamily                                     | PF03171        | 4                     |
| 2OG-Fe(II) oxygenase superfamily                                     | PF13532        | 2                     |
| 2-oxoacid dehydrogenases acyltransferase (catalytic domain)          | PF00198        | 1                     |

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|--|---------|---|
| 3' exoribonuclease family, domain 1                            | PF01138 | 2 |
| 39S mitochondrial ribosomal protein L46                        | PF11788 | 1 |
| 3-beta hydroxysteroid dehydrogenase/isomerase family           | PF01073 | 5 |
| 3-Oxoacyl-[acyl-carrier-protein (ACP)] synthase III C terminal | PF08541 | 1 |
| 4F5 protein family   | PF04419 | 2 |
| 4Fe-4S dicluster domain  | PF13534 | 2 |
| 4Fe-4S dicluster domain  | PF13183 | 2 |
| 4Fe-4S iron sulfur cluster binding proteins, NifH/frxC family  | PF00142 | 1 |
| 50S ribosome-binding GTPase                                    | PF01926 | 4 |
| 56kDa selenium binding protein (SBP56)                         | PF05694 | 1 |
| 6,7-dimethyl-8-ribityllumazine synthase                        | PF00885 | 1 |
| 60s Acidic ribosomal protein                                   | PF00428 | 1 |
| 60S ribosome biogenesis protein Rrp14                          | PF15459 | 1 |
| 6-phosphofructo-2-kinase                                       | PF01591 | 1 |
| 8-oxoguanine DNA glycosylase, N-terminal domain                | PF07934 | 1 |
| AAA ATPase domain  | PF13191 | 6 |
| AAA domain   | PF13671 | 4 |
| AAA domain   | PF13207 | 7 |
| AAA domain   | PF13238 | 4 |
| AAA domain   | PF13481 | 4 |
| AAA domain   | PF13087 | 2 |
| AAA domain   | PF13086 | 2 |
| AAA domain   | PF13614 | 1 |
| AAA domain   | PF13401 | 6 |
| AAA domain   | PF13476 | 2 |
| AAA domain   | PF13604 | 1 |
| AAA domain (Cdc48 subfamily)                                   | PF07724 | 2 |
| AAA domain (dynein-related subfamily)                          | PF07728 | 3 |
| AAA domain, putative AbiEii toxin, Type IV TA system           | PF13304 | 5 |
| AAA-ATPase Vps4-associated protein 1                           | PF08432 | 1 |
| ABC transporter  | PF00005 | 8 |
| ABC transporter transmembrane region                           | PF00664 | 3 |
| ABC transporter transmembrane region 2                         | PF06472 | 1 |

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|---|---------|---|
| ABC-2 family transporter protein              | PF12698 | 3 |
| ABC-2 type transporter                        | PF01061 | 3 |
| ABC-transporter extracellular N-terminal      | PF14510 | 2 |
| Acetokinase family                            | PF00871 | 1 |
| Acetyltransferase (GNAT) domain               | PF13508 | 3 |
| Acetyltransferase (GNAT) domain               | PF13673 | 1 |
| Acetyltransferase (GNAT) domain               | PF13420 | 1 |
| Acetyltransferase (GNAT) domain               | PF13302 | 1 |
| Acetyltransferase (GNAT) family               | PF00583 | 3 |
| Aconitase C-terminal domain                   | PF00694 | 1 |
| Aconitase family (aconitate hydratase)        | PF00330 | 1 |
| Actin   | PF00022 | 1 |
| Acyl CoA binding protein                      | PF00887 | 1 |
| Acyl transferase domain                       | PF00698 | 3 |
| Acyl-CoA dehydrogenase, C-terminal domain     | PF00441 | 1 |
| Acyl-CoA dehydrogenase, C-terminal domain     | PF08028 | 1 |
| Acyl-CoA dehydrogenase, middle domain         | PF02770 | 1 |
| Acyl-CoA dehydrogenase, N-terminal domain     | PF02771 | 1 |
| Acyl-CoA reductase (LuxC)                     | PF05893 | 1 |
| Acylphosphatase                               | PF00708 | 1 |
| Acyltransferase                               | PF01553 | 2 |
| Adaptin N terminal region                     | PF01602 | 2 |
| Adaptor complexes medium subunit family       | PF00928 | 1 |
| Adenylate cyclase associated (CAP) C terminal | PF08603 | 1 |
| Adenylate kinase                              | PF00406 | 2 |
| Adenylate kinase, active site lid             | PF05191 | 2 |
| Adenylosuccinate lyase C-terminus             | PF10397 | 1 |
| ADP-ribosylation factor family                | PF00025 | 3 |
| AFG1-like ATPase                              | PF03969 | 1 |
| AhpC/TSA family                               | PF00578 | 2 |
| AICARFT/IMPCHase bienzyme                     | PF01808 | 1 |
| AIR carboxylase                               | PF00731 | 2 |
| AKAP7 2'5' RNA ligase-like domain             | PF10469 | 1 |

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|--|---------|----|
| Alanine racemase, N-terminal domain                                | PF01168 | 2  |
| Alcohol acetyltransferase  | PF07247 | 1  |
| Alcohol dehydrogenase GroES-like domain                            | PF08240 | 5  |
| Aldehyde dehydrogenase family                                      | PF00171 | 5  |
| Aldehyde oxidase and xanthine dehydrogenase, a/b hammerhead domain | PF01315 | 1  |
| Aldo/keto reductase family   | PF00248 | 6  |
| Aldose 1-epimerase   | PF01263 | 2  |
| ALG6, ALG8 glycosyltransferase family                              | PF03155 | 1  |
| Alginate lyase   | PF05426 | 2  |
| Alkaline phosphatase   | PF00245 | 3  |
| Allophanate hydrolase subunit 1                                    | PF02682 | 1  |
| Allophanate hydrolase subunit 2                                    | PF02626 | 1  |
| Alpha amylase, catalytic domain                                    | PF00128 | 2  |
| Alpha and gamma adaptin binding protein p34                        | PF10199 | 1  |
| Alpha/beta hydrolase family  | PF12697 | 24 |
| Alpha/beta hydrolase family  | PF12695 | 23 |
| alpha/beta hydrolase fold  | PF07859 | 16 |
| alpha/beta hydrolase fold  | PF00561 | 7  |
| Alpha-L-arabinofuranosidase B (ABFB) domain                        | PF05270 | 2  |
| Alpha-L-arabinofuranosidase B, catalytic                           | PF09206 | 1  |
| Alpha-L-arabinofuranosidase C-terminal domain                      | PF06964 | 1  |
| Alpha-L-rhamnosidase N-terminal domain                             | PF08531 | 2  |
| Alternative oxidase  | PF01786 | 1  |
| Amidase  | PF01425 | 4  |
| Amidohydro_5 - Amidohydrolase                                      | PF13594 | 5  |
| Amidohydrolase family  | PF01979 | 5  |
| Amidohydrolase family  | PF07969 | 4  |
| Amidohydrolase family  | PF07908 | 1  |
| Amidohydrolase family  | PF13147 | 4  |
| Amino acid kinase family   | PF00696 | 1  |
| Amino acid permease  | PF00324 | 8  |
| Amino acid permease  | PF13520 | 8  |
| Aminotransferase class I and II                                    | PF00155 | 1  |

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|---|---------|----|
| Aminotransferase class-III                              | PF00202 | 1  |
| Aminotransferase class-V                                | PF00266 | 1  |
| AMP-binding enzyme                                      | PF00501 | 9  |
| AMP-binding enzyme C-terminal domain                    | PF13193 | 5  |
| Amylo-alpha-1,6-glucosidase                             | PF06202 | 0  |
| Anaphase promoting complex (APC) subunit 2              | PF08672 | 1  |
| Anaphase-promoting complex APC subunit CDC26            | PF10471 | 1  |
| Ankyrin repeat  | PF00023 | 9  |
| Ankyrin repeat  | PF13606 | 9  |
| Ankyrin repeats (3 copies)                              | PF12796 | 9  |
| Ankyrin repeats (many copies)                           | PF13637 | 10 |
| Ankyrin repeats (many copies)                           | PF13857 | 8  |
| Annexin   | PF00191 | 1  |
| Anp1  | PF03452 | 1  |
| Apoptosis antagonizing transcription factor             | PF13339 | 1  |
| Apoptosis-antagonizing transcription factor, C-terminal | PF08164 | 1  |
| AraC-like ligand binding domain                         | PF02311 | 1  |
| ARD/ARD' family   | PF03079 | 1  |
| Arginase family   | PF00491 | 2  |
| ARID/BRIGHT DNA binding domain                          | PF01388 | 1  |
| Armadillo/beta-catenin-like repeat                      | PF00514 | 1  |
| ARP2/3 complex ARPC3 (21 kDa) subunit                   | PF04062 | 1  |
| Arp2/3 complex, 34 kD subunit p34-Arc                   | PF04045 | 1  |
| ARS binding protein 2                                   | PF09441 | 2  |
| Arylsulfotransferase (ASST)                             | PF14269 | 2  |
| Arylsulfotransferase (ASST)                             | PF05935 | 2  |
| Asparaginase  | PF01112 | 1  |
| Aspartyl protease                                       | PF13650 | 3  |
| AT hook motif   | PF02178 | 1  |
| Ataxin-2 C-terminal region                              | PF07145 | 1  |
| ATP synthase complex subunit h                          | PF10775 | 1  |
| ATP synthase subunit C                                  | PF00137 | 1  |
| ATP synthase subunit D                                  | PF01813 | 1  |

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|---|---------|----|
| ATP10 protein   | PF05176 | 1  |
| ATPase domain predominantly from Archaea                        | PF01637 | 3  |
| ATPase family associated with various cellular activities (AAA) | PF00004 | 7  |
| ATPase MipZ   | PF09140 | 1  |
| ATP-dependent Clp protease adaptor protein ClpS                 | PF02617 | 1  |
| ATP-dependent protease La (LON) substrate-binding domain        | PF02190 | 1  |
| ATP-grasp domain  | PF02222 | 3  |
| ATP-grasp domain  | PF13535 | 4  |
| Autophagocytosis associated protein, active-site domain         | PF03987 | 1  |
| Autophagy protein Apg6  | PF04111 | 1  |
| Autophagy protein Atg8 ubiquitin like                           | PF02991 | 1  |
| Autophagy-related protein 11                                    | PF10377 | 1  |
| Autophagy-related protein 13                                    | PF10033 | 1  |
| Autophagy-related protein 27                                    | PF09451 | 1  |
| Autophagy-related protein C terminal domain                     | PF09333 | 1  |
| Bacterial alpha-L-rhamnosidase                                  | PF05592 | 5  |
| Bacterial low temperature requirement A protein (LtrA)          | PF06772 | 1  |
| Bacterial transferase hexapeptide (six repeats)                 | PF00132 | 1  |
| BAH domain  | PF01426 | 1  |
| Barwin family   | PF00967 | 2  |
| Basic region leucine zipper                                     | PF07716 | 1  |
| B-cell receptor-associated protein 31-like                      | PF05529 | 2  |
| Berberine and berberine like                                    | PF08031 | 10 |
| Beta/Gamma crystallin   | PF00030 | 1  |
| beta-acetyl hexosaminidase like                                 | PF14845 | 1  |
| Beta-Casp domain  | PF10996 | 1  |
| Beta-eliminating lyase  | PF01212 | 1  |
| Beta-galactosidase jelly roll domain                            | PF13364 | 2  |
| Beta-galactosidase, domain 2                                    | PF10435 | 2  |
| Beta-galactosidase, domain 3                                    | PF13363 | 2  |
| Beta-glucan synthesis-associated protein (SKN1)                 | PF03935 | 2  |
| Beta-glucosidase (SUN family)                                   | PF03856 | 3  |
| Beta-ketoacyl synthase, C-terminal domain                       | PF02801 | 2  |

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|---|---------|---|
| Beta-ketoacyl synthase, N-terminal domain | PF00109 | 3 |
| Beta-lactamase                            | PF00144 | 2 |
| Beta-lactamase superfamily domain         | PF12706 | 2 |
| Beta-lactamase superfamily domain         | PF13483 | 1 |
| Biotin carboxylase C-terminal domain      | PF02785 | 1 |
| Biotin carboxylase, N-terminal domain     | PF00289 | 1 |
| Biotin/lipoate A/B protein ligase family  | PF03099 | 1 |
| Biotin-lipoyl like                        | PF13533 | 1 |
| Biotin-requiring enzyme                   | PF00364 | 2 |
| Blastomyces yeast-phase-specific protein  | PF04681 | 1 |
| Blt1 N-terminal domain                    | PF12754 | 1 |
| BNR repeat-like domain                    | PF13088 | 2 |
| BNR/Asp-box repeat                        | PF02012 | 2 |
| BRCA1 C Terminus (BRCT) domain            | PF00533 | 2 |
| Brix domain                               | PF04427 | 1 |
| BRO1-like domain                          | PF03097 | 1 |
| Bromodomain                               | PF00439 | 1 |
| Bromodomain associated                    | PF07524 | 1 |
| BTB/POZ domain                            | PF00651 | 2 |
| BUD22                                     | PF09073 | 1 |
| bZIP Maf transcription factor             | PF03131 | 1 |
| bZIP transcription factor                 | PF00170 | 1 |
| C2 domain                                 | PF00168 | 1 |
| C2 domain in Dock180 and Zizimin proteins | PF14429 | 1 |
| C2H2-type zinc finger                     | PF13894 | 4 |
| CAAX protease self-immunity               | PF02517 | 1 |
| CAF1 family ribonuclease                  | PF04857 | 1 |
| Calcineurin-like phosphoesterase          | PF00149 | 6 |
| Calpain family cysteine protease          | PF00648 | 1 |
| Calponin homology (CH) domain             | PF00307 | 2 |
| Calreticulin family                       | PF00262 | 1 |
| Calsequestrin                             | PF01216 | 1 |
| Candida agglutinin-like (ALS)             | PF05792 | 1 |

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|--|---------|----|
| Carbamoyl-phosphate synthase L chain, ATP binding domain   | PF02786 | 2  |
| Carbohydrate binding domain X2                             | PF03442 | 1  |
| Carbon-nitrogen hydrolase                                  | PF00795 | 2  |
| Carboxylesterase family                                    | PF00135 | 20 |
| Carboxypeptidase regulatory-like domain                    | PF13620 | 1  |
| CAS/CSE protein, C-terminus                                | PF03378 | 1  |
| Casein kinase II regulatory subunit                        | PF01214 | 1  |
| Caspase domain   | PF00656 | 1  |
| Catalase   | PF00199 | 4  |
| Catalase-related immune-responsive                         | PF06628 | 4  |
| Cation efflux family                                       | PF01545 | 1  |
| Cation transport ATPase (P-type)                           | PF13246 | 4  |
| Cation transporter/ATPase, N-terminus                      | PF00690 | 2  |
| Cation transporting ATPase, C-terminus                     | PF00689 | 2  |
| CBS domain   | PF00571 | 1  |
| CCAAT-binding transcription factor (CBF-B/NF-YA) subunit B | PF02045 | 1  |
| CDC24 Calponin   | PF06395 | 1  |
| Cdc37 C terminal domain                                    | PF08564 | 1  |
| Cdc37 Hsp90 binding domain                                 | PF08565 | 1  |
| Cdc37 N terminal kinase binding                            | PF03234 | 1  |
| CDP-alcohol phosphatidyltransferase                        | PF01066 | 1  |
| CDR ABC transporter  | PF06422 | 3  |
| Cell division protein anillin                              | PF08174 | 1  |
| Cellulase (glycosyl hydrolase family 5)                    | PF00150 | 14 |
| Centromere protein H (CENP-H)                              | PF05837 | 1  |
| Centromere protein Scm3                                    | PF10384 | 1  |
| Centrosome localisation domain of PPC89                    | PF14197 | 1  |
| Centrosome microtubule-binding domain of Cep57             | PF06657 | 1  |
| Centrosomin N-terminal motif 1                             | PF07989 | 1  |
| CFEM domain  | PF05730 | 13 |
| ChaC-like protein  | PF04752 | 1  |
| Chalcone and stilbene synthases, C-terminal domain         | PF02797 | 1  |
| Chalcone and stilbene synthases, N-terminal domain         | PF00195 | 1  |



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|---|---------|---|
| CHD5-like protein                               | PF04420 | 2 |
| Chitin recognition protein                      | PF00187 | 1 |
| Chitin synthase                                 | PF03142 | 2 |
| Chitin synthase                                 | PF01644 | 1 |
| Chitin synthase N-terminal                      | PF08407 | 1 |
| Chloramphenicol phosphotransferase-like protein | PF07931 | 1 |
| Chlorophyllase enzyme                           | PF12740 | 1 |
| Choline/ethanolamine kinase                     | PF01633 | 1 |
| Chondroitinase B                                | PF14592 | 3 |
| CHORD   | PF04968 | 1 |
| Chorismate synthase                             | PF01264 | 1 |
| Chromatin associated protein KTI12              | PF08433 | 1 |
| Chromatin modification-related protein EAF7     | PF07904 | 1 |
| Cid1 family poly A polymerase                   | PF03828 | 1 |
| CLASP N terminal                                | PF12348 | 1 |
| Clr5 domain                                     | PF14420 | 1 |
| Clustered mitochondria                          | PF13236 | 1 |
| CO dehydrogenase flavoprotein C-terminal domain | PF03450 | 1 |
| CoA binding domain                              | PF13380 | 1 |
| CoA-transferase family III                      | PF02515 | 1 |
| CobQ/CobB/MinD/ParA nucleotide binding domain   | PF01656 | 2 |
| CobW/HypB/UreG, nucleotide-binding domain       | PF02492 | 2 |
| Coenzyme A transferase                          | PF01144 | 2 |
| Cofilin/tropomyosin-type actin-binding protein  | PF00241 | 1 |
| Common central domain of tyrosinase             | PF00264 | 5 |
| Complex 1 protein (LYR family)                  | PF05347 | 2 |
| Complex1_LYR-like                               | PF13232 | 2 |
| Condensation domain                             | PF00668 | 3 |
| Conserved hypothetical ATP binding protein      | PF03029 | 1 |
| Copper amine oxidase, enzyme domain             | PF01179 | 2 |
| Copper amine oxidase, N2 domain                 | PF02727 | 2 |
| Copper amine oxidase, N3 domain                 | PF02728 | 2 |
| Coproporphyrinogen III oxidase                  | PF01218 | 1 |

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|--|---------|----|
| CorA-like Mg <sup>2+</sup> transporter protein           | PF01544 | 3  |
| Core histone H2A/H2B/H3/H4                               | PF00125 | 2  |
| Cortical protein marker for cell polarity                | PF12768 | 1  |
| CPL (NUC119) domain                                      | PF08144 | 1  |
| CPSF A subunit region                                    | PF03178 | 1  |
| CRAL/TRIO domain   | PF00650 | 1  |
| Creatinase/Prolidase N-terminal domain                   | PF01321 | 1  |
| CrtC N-terminal lipocalin domain                         | PF07143 | 1  |
| CS domain  | PF04969 | 2  |
| C-terminal, D2-small domain, of ClpB protein             | PF10431 | 1  |
| Ctf8   | PF09696 | 2  |
| CTLH/CRA C-terminal to LisH motif domain                 | PF10607 | 1  |
| CTP synthase N-terminus                                  | PF06418 | 2  |
| Ctr copper transporter family                            | PF04145 | 1  |
| CUE domain   | PF02845 | 1  |
| Cupin  | PF00190 | 4  |
| Cupin domain   | PF07883 | 4  |
| Cutinase   | PF01083 | 14 |
| Cyclic nucleotide-binding domain                         | PF00027 | 1  |
| Cyclin, C-terminal domain                                | PF02984 | 1  |
| Cyclin, N-terminal domain                                | PF00134 | 4  |
| Cyclophilin type peptidyl-prolyl cis-trans isomerase/CLD | PF00160 | 2  |
| Cys/Met metabolism PLP-dependent enzyme                  | PF01053 | 1  |
| Cytidylyltransferase-like                                | PF01467 | 1  |
| Cytochrome b5-like Heme/Steroid binding domain           | PF00173 | 3  |
| Cytochrome c/c1 heme lyase                               | PF01265 | 1  |
| Cytochrome C1 family                                     | PF02167 | 1  |
| Cytochrome oxidase complex assembly protein 1            | PF08695 | 1  |
| Cytochrome P450  | PF00067 | 8  |
| Cytoplasmic tRNA 2-thiolation protein 2                  | PF10288 | 2  |
| DAHP synthetase I family                                 | PF00793 | 1  |
| D-ala D-ala ligase C-terminus                            | PF07478 | 4  |
| D-arabinono-1,4-lactone oxidase                          | PF04030 | 1  |

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|---|---------|---|
| DASH complex subunit Dad3   | PF08656 | 1 |
| Dcp2, box A domain  | PF05026 | 1 |
| DDE superfamily endonuclease                                      | PF03184 | 1 |
| DDHD domain   | PF02862 | 1 |
| DEAD/DEAH box helicase  | PF00270 | 4 |
| DegT/DnrJ/EryC1/StrS aminotransferase family                      | PF01041 | 1 |
| Dehydratase family  | PF00920 | 1 |
| Deuterolysin metalloprotease (M35) family                         | PF02102 | 5 |
| DExH-box splicing factor binding site                             | PF12656 | 1 |
| DHH family  | PF01368 | 1 |
| Diacylglycerol acyltransferase                                    | PF03982 | 1 |
| Dienelactone hydrolase family                                     | PF01738 | 3 |
| Dihydroorotate dehydrogenase                                      | PF01180 | 1 |
| Dihydrouridine synthase (Dus)                                     | PF01207 | 2 |
| Dioxygenase   | PF00775 | 2 |
| Dip2/Utp12 Family   | PF04003 | 2 |
| Dipeptidyl peptidase IV (DPP IV) N-terminal region                | PF00930 | 1 |
| Disintegrin   | PF00200 | 1 |
| D-isomer specific 2-hydroxyacid dehydrogenase, catalytic domain   | PF00389 | 1 |
| D-isomer specific 2-hydroxyacid dehydrogenase, NAD binding domain | PF02826 | 2 |
| DJ-1/PfpI family  | PF01965 | 2 |
| DNA mismatch repair protein, C-terminal domain                    | PF01119 | 1 |
| DNA polymerase alpha subunit p180 N terminal                      | PF12254 | 1 |
| DNA Polymerase alpha zinc finger                                  | PF08996 | 1 |
| DNA polymerase family B   | PF00136 | 1 |
| DNA polymerase family B, exonuclease domain                       | PF03104 | 1 |
| DNA polymerase III, delta subunit                                 | PF13177 | 2 |
| DNA polymerase III, delta subunit                                 | PF06144 | 1 |
| DNA polymerase Ligase (LigD)                                      | PF13298 | 1 |
| DNA repair metallo-beta-lactamase                                 | PF07522 | 1 |
| DNA topoisomerase   | PF01131 | 1 |
| DnaB-like helicase C terminal domain                              | PF03796 | 1 |
| DnaJ C terminal domain  | PF01556 | 0 |

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|---|---------|---|
| DnaJ central domain   | PF00684 | 0 |
| DnaJ domain   | PF00226 | 3 |
| Dock homology region 2  | PF06920 | 1 |
| Domain of unknown function (DUF1899)                          | PF08953 | 1 |
| Domain of unknown function (DUF1929)                          | PF09118 | 2 |
| Domain of unknown function (DUF1961)                          | PF09224 | 1 |
| Domain of unknown function (DUF1966)                          | PF09260 | 1 |
| Domain of unknown function (DUF1996)                          | PF09362 | 4 |
| Domain of unknown function (DUF2405)                          | PF10293 | 1 |
| Domain of unknown function (DUF2427)                          | PF10348 | 1 |
| Domain of unknown function (DUF2431)                          | PF10354 | 1 |
| Domain of unknown function (DUF3328)                          | PF11807 | 1 |
| Domain of unknown function (DUF3395)                          | PF11875 | 1 |
| Domain of unknown function (DUF3453)                          | PF11935 | 1 |
| Domain of unknown function (DUF3492)                          | PF11997 | 1 |
| Domain of unknown function (DUF3535)                          | PF12054 | 1 |
| Domain of unknown function (DUF3554)                          | PF12074 | 1 |
| Domain of unknown function (DUF3635)                          | PF12330 | 1 |
| Domain of unknown function (DUF3844)                          | PF12955 | 1 |
| Domain of unknown function (DUF4110)                          | PF13422 | 1 |
| Domain of unknown function (DUF4112)                          | PF13430 | 1 |
| Domain of unknown function (DUF4149)                          | PF13664 | 1 |
| Domain of unknown function (DUF4188)                          | PF13826 | 1 |
| Domain of unknown function (DUF4360)                          | PF14273 | 3 |
| Domain of unknown function (DUF4414)                          | PF14377 | 2 |
| Domain of unknown function (DUF4470)                          | PF14737 | 1 |
| Domain of unknown function (DUF814)                           | PF05670 | 1 |
| Domain of unknown function UPF0086                            | PF01868 | 1 |
| DOMON domain  | PF03351 | 1 |
| Dual specificity phosphatase, catalytic domain                | PF00782 | 2 |
| DUF4066 - Putative amidotransferase                           | PF13278 | 2 |
| D-xylulose 5-phosphate/D-fructose 6-phosphate phosphoketolase | PF03894 | 1 |
| Dynamitin   | PF04912 | 1 |

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|---|---------|----|
| Dynein light chain type 1                                 | PF01221 | 1  |
| E1-E2 ATPase  | PF00122 | 4  |
| e3 binding domain   | PF02817 | 1  |
| EamA-like transporter family                              | PF00892 | 1  |
| Ecdysteroid kinase  | PF02958 | 1  |
| EF hand   | PF00036 | 4  |
| EF hand   | PF13202 | 1  |
| EF-1 guanine nucleotide exchange domain                   | PF00736 | 1  |
| EF-hand domain  | PF14658 | 1  |
| EF-hand domain  | PF13405 | 3  |
| EF-hand domain pair                                       | PF13499 | 4  |
| EF-hand domain pair                                       | PF13833 | 3  |
| EGF-like domain   | PF07974 | 1  |
| eIF-6 family  | PF01912 | 1  |
| Elongation factor Tu C-terminal domain                    | PF03143 | 1  |
| Elongation factor Tu domain 2                             | PF03144 | 3  |
| Elongation factor Tu GTP binding domain                   | PF00009 | 5  |
| Emopamil binding protein                                  | PF05241 | 1  |
| emp24/gp25L/p24 family/GOLD                               | PF01105 | 6  |
| Endomembrane protein 70                                   | PF02990 | 1  |
| Endonuclease/Exonuclease/phosphatase family               | PF03372 | 4  |
| Endoplasmic reticulum protein ERp29, C-terminal domain    | PF07749 | 0  |
| Endoribonuclease L-PSP                                    | PF01042 | 2  |
| Enolase C-terminal domain-like                            | PF13378 | 1  |
| Enoyl-(Acyl carrier protein) reductase                    | PF13561 | 9  |
| Enoyl-CoA hydratase/isomerase                             | PF00378 | 3  |
| ER lumen protein retaining receptor                       | PF00810 | 1  |
| Ergosterol biosynthesis ERG4/ERG24 family                 | PF01222 | 1  |
| Esterase PHB depolymerase                                 | PF10503 | 5  |
| ETC complex I subunit conserved region                    | PF04800 | 1  |
| EthD domain   | PF07110 | 2  |
| Eukaryotic aspartyl protease                              | PF00026 | 19 |
| Eukaryotic elongation factor 1 beta central acidic region | PF10587 | 1  |

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| Eukaryotic porin   | PF01459 | 1  |
| Eukaryotic translation initiation factor 3 subunit 7 (eIF-3) | PF05091 | 1  |
| Eukaryotic translation initiation factor 4G1                 | PF12152 | 1  |
| Eukaryotic translation initiation factor eIF2A               | PF08662 | 3  |
| Eukaryotic-type carbonic anhydrase                           | PF00194 | 2  |
| Exocyst complex subunit Sec15-like                           | PF04091 | 1  |
| Exonuclease  | PF00929 | 3  |
| Exosome complex exonuclease RRP4 N-terminal region           | PF14382 | 1  |
| FAD binding domain   | PF01565 | 21 |
| FAD binding domain   | PF01494 | 10 |
| FAD binding domain   | PF00890 | 15 |
| FAD binding domain   | PF00667 | 1  |
| FAD binding domain in molybdopterin dehydrogenase            | PF00941 | 1  |
| FAD dependent oxidoreductase                                 | PF01266 | 19 |
| FAD dependent oxidoreductase                                 | PF12831 | 4  |
| FAD-binding domain   | PF08022 | 1  |
| FAD-NAD(P)-binding   | PF13454 | 5  |
| FAE1/Type III polyketide synthase-like protein               | PF08392 | 1  |
| Fasciclin domain   | PF02469 | 8  |
| FAT domain   | PF02259 | 1  |
| FATC domain  | PF02260 | 1  |
| Fatty acid desaturase  | PF00487 | 2  |
| Fatty acid hydroxylase superfamily                           | PF04116 | 1  |
| F-box domain   | PF00646 | 3  |
| F-box-like   | PF12937 | 2  |
| Ferric reductase like transmembrane component                | PF01794 | 1  |
| Ferric reductase NAD binding domain                          | PF08030 | 2  |
| Ferritin-like domain   | PF13668 | 3  |
| Fes/CIP4, and EFC/F-BAR homology domain                      | PF00611 | 1  |
| FG-GAP repeat  | PF01839 | 4  |
| FGGY family of carbohydrate kinases, C-terminal domain       | PF02782 | 1  |
| FGGY family of carbohydrate kinases, N-terminal domain       | PF00370 | 1  |
| FHA domain   | PF00498 | 1  |

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|---|---------|----|
| Fibronectin type III-like domain                      | PF14310 | 9  |
| Fic/DOC family  | PF02661 | 1  |
| Fip1 motif  | PF05182 | 1  |
| Fis1 C-terminal tetratricopeptide repeat              | PF14853 | 1  |
| Flavin containing amine oxidoreductase                | PF01593 | 8  |
| Flavin-binding monooxygenase-like                     | PF00743 | 6  |
| Flavodoxin  | PF00258 | 1  |
| Flavoprotein  | PF02441 | 1  |
| FMN-dependent dehydrogenase                           | PF01070 | 4  |
| Fn3-like domain                                       | PF06280 | 7  |
| Forkhead domain                                       | PF00250 | 1  |
| Formamidopyrimidine-DNA glycosylase H2TH domain       | PF06831 | 1  |
| Formamidopyrimidine-DNA glycosylase N-terminal domain | PF01149 | 1  |
| FR47-like protein                                     | PF08445 | 1  |
| Fringe-like   | PF02434 | 3  |
| Fructose-bisphosphate aldolase class-II               | PF01116 | 1  |
| FtsJ-like methyltransferase                           | PF01728 | 1  |
| Fumarylacetoacetase N-terminal                        | PF09298 | 1  |
| Fumarylacetoacetate (FAA) hydrolase family            | PF01557 | 3  |
| Fungal cellulose binding domain                       | PF00734 | 34 |
| Fungal chitinase of glycosyl hydrolase group 75       | PF07335 | 1  |
| Fungal hydrophobin                                    | PF06766 | 4  |
| Fungal specific transcription factor domain           | PF04082 | 16 |
| Fungal specific transcription factor domain           | PF11951 | 9  |
| Fungal trichothecene efflux pump (TRI12)              | PF06609 | 6  |
| Fungal Zn(2)-Cys(6) binuclear cluster domain          | PF00172 | 15 |
| Fungalysin metalloproteinase (M36)                    | PF02128 | 2  |
| Fungalysin/Thermolysin Propeptide Motif               | PF07504 | 2  |
| FYVE zinc finger                                      | PF01363 | 1  |
| GAG-pre-integrase domain                              | PF13976 | 1  |
| Galactose mutarotase-like                             | PF13802 | 1  |
| Galactose oxidase, central domain                     | PF13415 | 4  |
| Galactose oxidase, central domain                     | PF13418 | 5  |

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| Gamma-glutamyl cyclotransferase, AIG2-like                   | PF06094 | 1  |
| Gamma-glutamyltranspeptidase                                 | PF01019 | 1  |
| GATA zinc finger   | PF00320 | 1  |
| Gcd10p family  | PF04189 | 1  |
| GC-rich sequence DNA-binding factor-like protein             | PF07842 | 1  |
| GDA1/CD39 (nucleoside phosphatase) family                    | PF01150 | 1  |
| GDSL-like Lipase/Acylhydrolase                               | PF00657 | 16 |
| GDSL-like Lipase/Acylhydrolase family                        | PF13472 | 13 |
| Gelsolin repeat  | PF00626 | 1  |
| GHMP kinases N terminal domain                               | PF00288 | 1  |
| GINS complex protein   | PF05916 | 2  |
| GLEYA domain   | PF10528 | 2  |
| Globin   | PF00042 | 1  |
| Glucanosyltransferase  | PF03198 | 4  |
| Glucosamine-6-phosphate isomerases/6-phosphogluconolactonase | PF01182 | 2  |
| Glucose / Sorbosone dehydrogenase                            | PF07995 | 1  |
| Glucose inhibited division protein A                         | PF01134 | 3  |
| Glucosidase II beta subunit-like                             | PF12999 | 0  |
| Glucosidase II beta subunit-like protein                     | PF07915 | 2  |
| Glucosidase II beta subunit-like protein                     | PF13015 | 0  |
| Glutaminase  | PF04960 | 1  |
| Glutamine amidotransferase class-I                           | PF00117 | 3  |
| Glutamine amidotransferase domain                            | PF13522 | 1  |
| Glutamine amidotransferase domain                            | PF13537 | 1  |
| Glutamine amidotransferases class-II                         | PF00310 | 1  |
| Glutamine amidotransferases class-II                         | PF13230 | 1  |
| Glutaredoxin   | PF00462 | 1  |
| Glutaredoxin-like domain (DUF836)                            | PF05768 | 1  |
| Glutathione S-transferase, C-terminal domain                 | PF13410 | 1  |
| Glutathione S-transferase, C-terminal domain                 | PF00043 | 1  |
| Glutathione S-transferase, N-terminal domain                 | PF13417 | 2  |
| Glutathione S-transferase, N-terminal domain                 | PF13409 | 2  |
| Glutathione S-transferase, N-terminal domain                 | PF02798 | 2  |



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| Glutathione-dependent formaldehyde-activating enzyme | PF04828 | 2  |
| Glycerophosphoryl diester phosphodiesterase family   | PF03009 | 1  |
| Glycine-rich protein domain (DUF2403)                | PF10290 | 3  |
| Glycolipid 2-alpha-mannosyltransferase               | PF01793 | 1  |
| Glycoside-hydrolase family GH114                     | PF03537 | 2  |
| Glycosyl hydrolase catalytic core                    | PF11790 | 3  |
| Glycosyl hydrolase family 1                          | PF00232 | 1  |
| Glycosyl hydrolase family 10                         | PF00331 | 6  |
| Glycosyl hydrolase family 12                         | PF01670 | 5  |
| Glycosyl hydrolase family 20, catalytic domain       | PF00728 | 2  |
| Glycosyl hydrolase family 20, domain 2               | PF02838 | 1  |
| Glycosyl hydrolase family 26                         | PF02156 | 1  |
| Glycosyl hydrolase family 3 C-terminal domain        | PF01915 | 9  |
| Glycosyl hydrolase family 3 N terminal domain        | PF00933 | 9  |
| Glycosyl hydrolase family 30 TIM-barrel domain       | PF02055 | 1  |
| Glycosyl hydrolase family 45                         | PF02015 | 3  |
| Glycosyl hydrolase family 47                         | PF01532 | 4  |
| Glycosyl hydrolase family 49                         | PF03718 | 1  |
| Glycosyl hydrolase family 53                         | PF07745 | 1  |
| Glycosyl hydrolase family 57                         | PF03065 | 1  |
| Glycosyl hydrolase family 61                         | PF03443 | 22 |
| Glycosyl hydrolase family 63 C-terminal domain       | PF03200 | 0  |
| Glycosyl hydrolase family 67 C-terminus              | PF07477 | 1  |
| Glycosyl hydrolase family 67 middle domain           | PF07488 | 1  |
| Glycosyl hydrolase family 67 N-terminus              | PF03648 | 1  |
| Glycosyl hydrolase family 7                          | PF00840 | 6  |
| Glycosyl hydrolase family 71                         | PF03659 | 1  |
| Glycosyl hydrolase family 76                         | PF03663 | 7  |
| Glycosyl hydrolase family 81                         | PF03639 | 1  |
| Glycosyl Hydrolase Family 88                         | PF07470 | 5  |
| Glycosyl hydrolase family 92                         | PF07971 | 1  |
| Glycosyl hydrolases family 11                        | PF00457 | 3  |
| Glycosyl hydrolases family 15                        | PF00723 | 2  |

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| Glycosyl hydrolases family 16                                 | PF00722 | 8  |
| Glycosyl hydrolases family 17                                 | PF00332 | 2  |
| Glycosyl hydrolases family 18                                 | PF00704 | 10 |
| Glycosyl hydrolases family 2                                  | PF00703 | 2  |
| Glycosyl hydrolases family 2, sugar binding domain            | PF02837 | 2  |
| Glycosyl hydrolases family 2, TIM barrel domain               | PF02836 | 2  |
| Glycosyl hydrolases family 28                                 | PF00295 | 11 |
| Glycosyl hydrolases family 31                                 | PF01055 | 1  |
| Glycosyl hydrolases family 32 C terminal                      | PF08244 | 3  |
| Glycosyl hydrolases family 32 N-terminal domain               | PF00251 | 6  |
| Glycosyl hydrolases family 35                                 | PF01301 | 2  |
| Glycosyl hydrolases family 39                                 | PF01229 | 1  |
| Glycosyl hydrolases family 43                                 | PF04616 | 19 |
| Glycosyl hydrolases family 6                                  | PF01341 | 4  |
| Glycosyl transferase family 64 domain                         | PF09258 | 1  |
| Glycosyl transferase family 8                                 | PF01501 | 1  |
| Glycosyl transferase family 90                                | PF05686 | 2  |
| Glycosyl transferase family group 2                           | PF13632 | 2  |
| Glycosyl transferases group 1                                 | PF00534 | 1  |
| Glycosyltransferase family 28 N-terminal domain               | PF03033 | 1  |
| Glycosyltransferase like family 2                             | PF13641 | 1  |
| Glycosyltransferase sugar-binding region containing DXD motif | PF04488 | 2  |
| Glyoxal oxidase N-terminus                                    | PF07250 | 2  |
| GMC oxidoreductase  | PF00732 | 16 |
| GMC oxidoreductase  | PF05199 | 16 |
| GMP synthase C terminal domain                                | PF00958 | 1  |
| Golgi CORVET complex core vacuolar protein 8                  | PF12816 | 1  |
| Golgi phosphoprotein 3 (GPP34)                                | PF05719 | 1  |
| Golgi-body localisation protein domain                        | PF10351 | 1  |
| Got1/Sft2-like family   | PF04178 | 1  |
| G-patch domain  | PF01585 | 1  |
| Gpi16 subunit, GPI transamidase component                     | PF04113 | 1  |
| GPI-GlcNAc transferase complex, PIG-H component               | PF10181 | 2  |

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| GPR1/FUN34/yaaH family   | PF01184 | 1 |
| GrpE   | PF01025 | 1 |
| GTPase-activator protein for Ras-like GTPase                     | PF00616 | 1 |
| Gtr1/RagA G protein conserved region                             | PF04670 | 3 |
| Guanine nucleotide exchange factor in Golgi transport N-terminal | PF12783 | 1 |
| Guanylate kinase   | PF00625 | 1 |
| GYF domain   | PF02213 | 1 |
| HAD-hyrolase-like  | PF13242 | 2 |
| Haem-containing dehydratase                                      | PF13816 | 1 |
| haloacid dehalogenase-like hydrolase                             | PF12710 | 5 |
| haloacid dehalogenase-like hydrolase                             | PF00702 | 4 |
| Haloacid dehalogenase-like hydrolase                             | PF13344 | 2 |
| Haloacid dehalogenase-like hydrolase                             | PF13419 | 1 |
| haloacid dehalogenase-like hydrolase                             | PF08282 | 1 |
| HAT (Half-A-TPR) repeat  | PF02184 | 1 |
| HEAT repeat  | PF02985 | 5 |
| HEAT repeats   | PF13646 | 4 |
| HEAT-like repeat   | PF13513 | 4 |
| HECT-domain (ubiquitin-transferase)                              | PF00632 | 2 |
| HeH/LEM domain   | PF12949 | 1 |
| Helicase associated domain (HA2)                                 | PF04408 | 2 |
| Helicase conserved C-terminal domain                             | PF00271 | 5 |
| Helix-loop-helix DNA-binding domain                              | PF00010 | 3 |
| Hemerythrin HHE cation binding domain                            | PF01814 | 1 |
| Hepatocellular carcinoma-associated antigen 59                   | PF07052 | 1 |
| Heterokaryon incompatibility protein (HET)                       | PF06985 | 4 |
| Heterokaryon incompatibility protein Het-C                       | PF07217 | 3 |
| Hexokinase   | PF03727 | 1 |
| Hexokinase   | PF00349 | 1 |
| HhH-GPD superfamily base excision DNA repair protein             | PF00730 | 1 |
| HI0933-like protein  | PF03486 | 6 |
| His Kinase A (phospho-acceptor) domain                           | PF00512 | 1 |
| Histidine biosynthesis protein                                   | PF00977 | 1 |

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| Histidine kinase-, DNA gyrase B-, and HSP90-like ATPase           | PF13589 | 1 |
| Histidine kinase-, DNA gyrase B-, and HSP90-like ATPase           | PF02518 | 3 |
| Histidine phosphatase superfamily (branch 1)                      | PF00300 | 4 |
| Histidine phosphatase superfamily (branch 2)                      | PF00328 | 5 |
| Histidinol dehydrogenase  | PF00815 | 1 |
| Histone acetyltransferases subunit 3                              | PF10198 | 1 |
| Histone chaperone Rtp106-like                                     | PF08512 | 1 |
| Histone deacetylase domain  | PF00850 | 2 |
| Histone-like transcription factor (CBF/NF-Y) and archaeal histone | PF00808 | 2 |
| HIT zinc finger   | PF04438 | 1 |
| HMG (high mobility group) box                                     | PF00505 | 4 |
| HMG-box domain  | PF09011 | 3 |
| HMGL-like   | PF00682 | 1 |
| HNH endonuclease  | PF01844 | 1 |
| Holliday junction DNA helicase ruvB N-terminus                    | PF05496 | 3 |
| homogentisate 1,2-dioxygenase                                     | PF04209 | 2 |
| HOOK protein  | PF05622 | 1 |
| HPC2 and ubinuclein domain  | PF08729 | 1 |
| HpcH/HpaI aldolase/citrate lyase family                           | PF03328 | 2 |
| Hpt domain  | PF01627 | 1 |
| Hsp70 protein   | PF00012 | 3 |
| HxxPF-repeated domain   | PF13745 | 2 |
| Hydrogenase-1 expression protein HyaE                             | PF07449 | 1 |
| Hydrophobic surface binding protein A                             | PF12296 | 4 |
| IBR domain, a half RING-finger domain                             | PF01485 | 1 |
| ICE2  | PF08426 | 1 |
| IKI3 family   | PF04762 | 1 |
| Immune inhibitor A peptidase M6                                   | PF05547 | 1 |
| IMP dehydrogenase / GMP reductase domain                          | PF00478 | 2 |
| Importin-beta N-terminal domain                                   | PF03810 | 1 |
| Indoleamine 2,3-dioxygenase                                       | PF01231 | 1 |
| Inhibitor of Apoptosis domain                                     | PF00653 | 1 |
| Inhibitor of growth proteins N-terminal histone-binding           | PF12998 | 1 |

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| Initiation factor eIF2 gamma, C terminal                   | PF09173 | 1  |
| Inorganic pyrophosphatase                                  | PF00719 | 1  |
| Inosine-uridine preferring nucleoside hydrolase            | PF01156 | 1  |
| Inositol phosphatase                                       | PF12456 | 1  |
| Inositol-pentakisphosphate 2-kinase                        | PF06090 | 1  |
| Inositolphosphorylceramide synthase subunit Kei1           | PF08552 | 1  |
| Insecticide toxin TcdB middle/N-terminal region            | PF12256 | 4  |
| Insulin-induced protein (INSIG)                            | PF07281 | 1  |
| Integrase core domain                                      | PF00665 | 1  |
| Ion channel regulatory protein UNC-93                      | PF05978 | 1  |
| IQ calmodulin-binding motif                                | PF00612 | 1  |
| Iron/manganese superoxide dismutases, alpha-hairpin domain | PF00081 | 1  |
| Iron/manganese superoxide dismutases, C-terminal domain    | PF02777 | 1  |
| Iron-containing alcohol dehydrogenase                      | PF00465 | 1  |
| Iron-containing alcohol dehydrogenase                      | PF13685 | 1  |
| Isochorismatase family                                     | PF00857 | 4  |
| Isocitrate/isopropylmalate dehydrogenase                   | PF00180 | 1  |
| Isy1-like splicing family                                  | PF06246 | 1  |
| JAB1/Mov34/MPN/PAD-1 ubiquitin protease                    | PF01398 | 1  |
| Jacalin-like lectin domain                                 | PF01419 | 1  |
| Kelch motif  | PF13854 | 7  |
| Kelch motif  | PF01344 | 4  |
| Kelch motif  | PF13964 | 5  |
| Kelch motif  | PF07646 | 3  |
| KH domain  | PF00013 | 1  |
| KilA-N domain  | PF04383 | 1  |
| Kinase-like  | PF14531 | 2  |
| Kinesin motor domain                                       | PF00225 | 1  |
| Kinetochore complex Sim4 subunit Fta1                      | PF13092 | 1  |
| KR domain  | PF08659 | 13 |
| Ku C terminal domain like                                  | PF08785 | 1  |
| Ku70/Ku80 beta-barrel domain                               | PF02735 | 1  |
| Ku70/Ku80 N-terminal alpha/beta domain                     | PF03731 | 1  |

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| La domain  | PF05383 | 1 |
| Lactonase, 7-bladed beta-propeller                       | PF10282 | 3 |
| Legume-like lectin family                                | PF03388 | 1 |
| LETM1-like protein                                       | PF07766 | 1 |
| LeuA allosteric (dimerisation) domain                    | PF08502 | 1 |
| Leucine rich repeat                                      | PF13855 | 2 |
| Leucine Rich Repeat                                      | PF00560 | 2 |
| Leucine Rich repeat                                      | PF13516 | 2 |
| Leucine Rich repeats (2 copies)                          | PF12799 | 1 |
| Leucine-rich repeat                                      | PF14580 | 1 |
| LicD family  | PF04991 | 2 |
| Life-span regulatory factor                              | PF12855 | 1 |
| LIM domain   | PF00412 | 1 |
| Lipase (class 3)   | PF01764 | 5 |
| Lipase 3 N-terminal region                               | PF03893 | 1 |
| Lipocalin-like domain                                    | PF08212 | 1 |
| Lipocalin-like domain                                    | PF13924 | 1 |
| LisH   | PF08513 | 1 |
| LITAF-like zinc ribbon domain                            | PF10601 | 1 |
| L-lysine 6-monooxygenase (NADPH-requiring)               | PF13434 | 8 |
| LMBR1-like membrane protein                              | PF04791 | 1 |
| LRR_7,Leucine rich repeat                                | PF13504 | 1 |
| LSM domain   | PF01423 | 4 |
| Lung seven transmembrane receptor                        | PF06814 | 1 |
| Lyase  | PF00206 | 1 |
| Lycopene cyclase protein                                 | PF05834 | 3 |
| Lysine-specific metallo-endopeptidase                    | PF14521 | 1 |
| LysM domain  | PF01476 | 9 |
| Lysophospholipase catalytic domain                       | PF01735 | 1 |
| Lytic polysaccharide mono-oxygenase, cellulose-degrading | PF03067 | 3 |
| Lytic transglycolase                                     | PF03330 | 3 |
| M42 glutamyl aminopeptidase                              | PF05343 | 1 |
| Mad3/BUB1 homology region 1                              | PF08311 | 2 |

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| Maintenance of mitochondrial morphology protein 1                   | PF10296 | 1  |
| Maintenance of mitochondrial structure and function                 | PF13012 | 1  |
| Major Facilitator Superfamily                                       | PF07690 | 17 |
| Major intrinsic protein   | PF00230 | 1  |
| Male sterility protein  | PF07993 | 6  |
| Mandelate racemase / muconate lactonizing enzyme, C-terminal domain | PF01188 | 1  |
| Mandelate racemase / muconate lactonizing enzyme, N-terminal domain | PF02746 | 1  |
| MBOAT, membrane-bound O-acyltransferase family                      | PF03062 | 2  |
| Mechanosensitive ion channel  | PF00924 | 2  |
| Meiosis protein SPO22/ZIP4 like                                     | PF08631 | 1  |
| Melibiose   | PF02065 | 1  |
| Membrane magnesium transporter                                      | PF10270 | 1  |
| Metallo-beta-lactamase superfamily                                  | PF00753 | 2  |
| Metallo-peptidase family M12  | PF13688 | 2  |
| Metallo-peptidase family M12B Reprolysin-like                       | PF13583 | 2  |
| Metallo-peptidase family M12B Reprolysin-like                       | PF13582 | 4  |
| Metallo-peptidase family M12B Reprolysin-like                       | PF13574 | 1  |
| Metallopeptidase family M24   | PF00557 | 1  |
| Methyltransf_26   | PF13659 | 6  |
| Methyltransferase domain  | PF13383 | 1  |
| Methyltransferase domain  | PF13489 | 9  |
| Methyltransferase domain  | PF08241 | 11 |
| Methyltransferase domain  | PF12847 | 9  |
| Methyltransferase domain  | PF08242 | 8  |
| Methyltransferase domain  | PF13847 | 9  |
| Methyltransferase domain  | PF13649 | 5  |
| Methyltransferase FkbM domain                                       | PF05050 | 1  |
| Methyltransferase small domain                                      | PF05175 | 3  |
| MGS-like domain   | PF02142 | 1  |
| Microtubule-associated protein CRIPT                                | PF10235 | 2  |
| Mid2 like cell wall stress sensor                                   | PF04478 | 2  |
| MIF4G domain  | PF02854 | 2  |
| Misato Segment II tubulin-like domain                               | PF10644 | 1  |

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| Mitochondrial ATPase inhibitor, IATP                             | PF04568 | 1 |
| Mitochondrial biogenesis AIM24                                   | PF01987 | 1 |
| Mitochondrial branched-chain alpha-ketoacid dehydrogenase kinase | PF10436 | 2 |
| Mitochondrial carrier protein                                    | PF00153 | 7 |
| Mitochondrial F1-F0 ATP synthase subunit F of fungi              | PF10791 | 1 |
| Mitochondrial function, CLU-N-term                               | PF15044 | 1 |
| Mitochondrial import protein Pam17                               | PF08566 | 1 |
| Mitochondrial protein from FMP27                                 | PF10344 | 1 |
| Mitochondrial ribosomal protein L28                              | PF09812 | 1 |
| Mitochondrial ribosomal protein L37                              | PF08561 | 1 |
| Mitochondrial ribosomal subunit S27                              | PF08293 | 1 |
| ML domain  | PF02221 | 1 |
| ML-like domain   | PF14558 | 3 |
| Mo-co oxidoreductase dimerisation domain                         | PF03404 | 1 |
| MoeZ/MoeB domain   | PF05237 | 1 |
| Molybdopterin oxidoreductase                                     | PF00384 | 1 |
| Molybdopterin-binding domain of aldehyde dehydrogenase           | PF02738 | 1 |
| Mono-functional DNA-alkylating methyl methanesulfonate N-term    | PF10433 | 1 |
| MOSC domain  | PF03473 | 1 |
| MOSC N-terminal beta barrel domain                               | PF03476 | 1 |
| MreB/Mbl protein   | PF06723 | 2 |
| MSP (Major sperm protein) domain                                 | PF00635 | 1 |
| Multicopper oxidase  | PF07732 | 5 |
| Multicopper oxidase  | PF07731 | 5 |
| Multicopper oxidase  | PF00394 | 5 |
| Mycolic acid cyclopropane synthetase                             | PF02353 | 3 |
| MYND finger  | PF01753 | 2 |
| N terminal extension of bacteriophage endosialidase              | PF12218 | 3 |
| N2227-like protein   | PF07942 | 1 |
| Na <sup>+</sup> dependent nucleoside transporter C-terminus      | PF07662 | 1 |
| Na <sup>+</sup> dependent nucleoside transporter N-terminus      | PF01773 | 1 |
| NACHT domain   | PF05729 | 6 |
| NAD dependent epimerase/dehydratase family                       | PF01370 | 8 |



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| NAD synthase   | PF02540 | 1  |
| NAD(P)-binding Rossmann-like domain                            | PF13450 | 21 |
| NAD(P)H-binding  | PF13460 | 9  |
| NADH:flavin oxidoreductase / NADH oxidase family               | PF00724 | 1  |
| NADH-ubiquinone oxidoreductase subunit G, C-terminal           | PF09326 | 1  |
| NADH-ubiquinone oxidoreductase-G iron-sulfur binding region    | PF10588 | 1  |
| NADP oxidoreductase coenzyme F420-dependent                    | PF03807 | 1  |
| NAT, N-acetyltransferase, of N-acetylglutamate synthase        | PF04768 | 1  |
| Nbl1 / Borealin N terminal                                     | PF10444 | 1  |
| Ndr family   | PF03096 | 1  |
| Necrosis inducing protein (NPP1)                               | PF05630 | 6  |
| Neutral/alkaline non-lysosomal ceramidase, N-terminal          | PF04734 | 1  |
| NHL repeat   | PF01436 | 1  |
| Nitrite and sulphite reductase 4Fe-4S domain                   | PF01077 | 1  |
| Nitrite/Sulfite reductase ferredoxin-like half domain          | PF03460 | 1  |
| Nitrogen Permease regulator of amino acid transport activity 3 | PF03666 | 1  |
| Nitronate monooxygenase  | PF03060 | 2  |
| NLI interacting factor-like phosphatase                        | PF03031 | 1  |
| NmrA-like family   | PF05368 | 6  |
| NMT1/THI5 like   | PF09084 | 1  |
| NMT1-like family   | PF13379 | 1  |
| Noc2p family   | PF03715 | 1  |
| non-haem dioxygenase in morphine synthesis N-terminal          | PF14226 | 4  |
| Non-repetitive/WGA-negative nucleoporin C-terminal             | PF03177 | 1  |
| non-SMC mitotic condensation complex subunit 1                 | PF12717 | 2  |
| Nop53 (60S ribosomal biogenesis)                               | PF07767 | 1  |
| NOSIC  | PF08060 | 1  |
| Nrap protein   | PF03813 | 1  |
| Nsp1-like C-terminal region                                    | PF05064 | 1  |
| N-terminal domain of ribose phosphate pyrophosphokinase        | PF13793 | 1  |
| N-terminal region of Chorein or VPS13                          | PF12624 | 1  |
| N-terminus of kinetochore NMS complex subunit Spc7             | PF15402 | 1  |
| NUBPL iron-transfer P-loop NTPase                              | PF10609 | 1  |

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|---|---------|----|
| NUC153 domain                                       | PF08159 | 1  |
| Nucleoporin FG repeat region                        | PF13634 | 1  |
| Nucleoporin Nup120/160                              | PF11715 | 6  |
| Nucleoside transporter                              | PF01733 | 2  |
| Nucleosome assembly protein (NAP)                   | PF00956 | 1  |
| Nucleotide exchange factor Fes1                     | PF08609 | 1  |
| Nucleotide-sugar transporter                        | PF04142 | 1  |
| Nucleotidyltransferase                              | PF06042 | 1  |
| Nucleotidyltransferase domain                       | PF01909 | 2  |
| NUDIX domain  | PF00293 | 3  |
| Nuf2 family   | PF03800 | 1  |
| Nup133 N terminal like                              | PF08801 | 1  |
| Nup53/35/40-type RNA recognition motif              | PF14605 | 2  |
| O-Glycosyl hydrolase family 30                      | PF14587 | 1  |
| Oligonucleotide/oligosaccharide-binding (OB)-fold   | PF07717 | 2  |
| Oligosaccharyltransferase subunit Ribophorin II     | PF05817 | 1  |
| O-methyltransferase                                 | PF00891 | 1  |
| OST3 / OST6 family, transporter family              | PF04756 | 1  |
| Oxidoreductase FAD-binding domain                   | PF00970 | 3  |
| Oxidoreductase family, C-terminal alpha/beta domain | PF02894 | 1  |
| Oxidoreductase family, NAD-binding Rossmann fold    | PF01408 | 1  |
| Oxidoreductase molybdopterin binding domain         | PF00174 | 1  |
| Oxidoreductase NAD-binding domain                   | PF00175 | 3  |
| PA domain   | PF02225 | 11 |
| PA14 domain   | PF07691 | 1  |
| Paf1  | PF03985 | 1  |
| Paired amphipathic helix repeat                     | PF02671 | 1  |
| PalH/RIM21  | PF08733 | 1  |
| Palmitoyl protein thioesterase                      | PF02089 | 0  |
| Pam16   | PF03656 | 1  |
| PAN domain  | PF00024 | 1  |
| PAP2 superfamily                                    | PF01569 | 1  |
| Parkin co-regulated protein                         | PF10274 | 1  |

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| Part of AAA domain   | PF13245 | 2  |
| Patatin-like phospholipase                                   | PF01734 | 1  |
| Pathogen effector  | PF14856 | 5  |
| PB1 domain   | PF00564 | 1  |
| PCI domain   | PF01399 | 1  |
| PCRF domain  | PF03462 | 1  |
| Pectate lyase  | PF00544 | 15 |
| Pectate lyase  | PF03211 | 16 |
| Pectate lyase superfamily protein                            | PF12708 | 3  |
| Pectinesterase   | PF01095 | 5  |
| Pentatricopeptide repeat domain                              | PF13812 | 1  |
| PE-PPE domain  | PF08237 | 5  |
| Peptidase C13 family   | PF01650 | 1  |
| Peptidase C26  | PF07722 | 3  |
| Peptidase dimerisation domain                                | PF07687 | 3  |
| Peptidase family M1  | PF01433 | 1  |
| Peptidase family M20/M25/M40                                 | PF01546 | 7  |
| Peptidase family M28   | PF04389 | 12 |
| Peptidase family M3  | PF01432 | 1  |
| Peptidase family M49   | PF03571 | 1  |
| Peptidase family S41   | PF03572 | 3  |
| Peptidase inhibitor I78 family                               | PF11720 | 1  |
| Peptidase inhibitor I9                                       | PF05922 | 6  |
| Pericentrin-AKAP-450 domain of centrosomal targeting protein | PF10495 | 1  |
| Periplasmic copper-binding protein (NosD)                    | PF05048 | 1  |
| Permease family  | PF00860 | 1  |
| Permease for cytosine/purines, uracil, thiamine, allantoin   | PF02133 | 1  |
| Peroxidase   | PF00141 | 6  |
| Peroxidase, family 2   | PF01328 | 1  |
| Peroxin 13, N-terminal region                                | PF04088 | 2  |
| PH domain  | PF00169 | 3  |
| Phage lysozyme   | PF00959 | 1  |
| PHD-finger   | PF00628 | 3  |

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| PHD-finger   | PF13831 | 1 |
| PHD-like zinc-binding domain                                       | PF13771 | 1 |
| PHD-zinc-finger like domain  | PF13832 | 1 |
| Phenazine biosynthesis-like protein                                | PF02567 | 1 |
| PHF5-like protein  | PF03660 | 1 |
| PhoD-like phosphatase  | PF09423 | 2 |
| Phorbol esters/diacylglycerol binding domain (C1 domain)           | PF00130 | 1 |
| Phosphate transporter family                                       | PF01384 | 2 |
| Phosphatidylethanolamine-binding protein                           | PF01161 | 2 |
| Phosphatidylinositol 3- and 4-kinase                               | PF00454 | 2 |
| Phosphatidylinositol-4-phosphate 5-Kinase                          | PF01504 | 1 |
| Phosphoesterase family   | PF04185 | 1 |
| Phosphoglucomutase/phosphomannomutase, alpha/beta/alpha domain I   | PF02878 | 1 |
| Phosphoglucomutase/phosphomannomutase, alpha/beta/alpha domain II  | PF02879 | 1 |
| Phosphoglucomutase/phosphomannomutase, alpha/beta/alpha domain III | PF02880 | 1 |
| Phosphoglucomutase/phosphomannomutase, C-terminal domain           | PF00408 | 1 |
| Phosphoinositide 3-kinase C2                                       | PF00792 | 1 |
| Phosphoinositide 3-kinase family, accessory domain (PIK domain)    | PF00613 | 1 |
| Phospholipase/Carboxylesterase                                     | PF02230 | 1 |
| Phosphopantetheine attachment site                                 | PF00550 | 5 |
| Phosphoribosyl synthetase-associated domain                        | PF14572 | 1 |
| Phosphoribosyl transferase domain                                  | PF00156 | 1 |
| Phosphoribulokinase / Uridine kinase family                        | PF00485 | 1 |
| Phosphorylase superfamily  | PF01048 | 3 |
| Phosphotransferase enzyme family                                   | PF01636 | 3 |
| PHP domain   | PF02811 | 1 |
| Phytanoyl-CoA dioxygenase (PhyH)                                   | PF05721 | 1 |
| Phytase  | PF02333 | 1 |
| pinin/SDK/memA/ protein conserved region                           | PF04696 | 2 |
| Pirin  | PF02678 | 1 |
| Plant protein of unknown function (DUF946)                         | PF06101 | 1 |
| Platelet-activating factor acetylhydrolase, isoform II             | PF03403 | 2 |
| Pleckstrin homology domain   | PF15411 | 1 |

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| Pleckstrin homology domain  | PF15410 | 2 |
| Pleckstrin homology domain  | PF15413 | 2 |
| P-loop containing region of AAA domain                                | PF13555 | 2 |
| Poly A polymerase head domain   | PF01743 | 1 |
| Poly(A) polymerase central domain                                     | PF04928 | 1 |
| Poly(A) polymerase predicted RNA binding domain                       | PF04926 | 1 |
| Poly(ADP-ribose) polymerase catalytic domain                          | PF00644 | 1 |
| Polyketide synthase dehydratase                                       | PF14765 | 2 |
| Polysaccharide biosynthesis protein                                   | PF02719 | 1 |
| Polysaccharide deacetylase  | PF01522 | 5 |
| Polysaccharide lyase family 4, domain II                              | PF14686 | 3 |
| Polysaccharide lyase family 4, domain III                             | PF14683 | 3 |
| PPIC-type PPIASE domain   | PF13616 | 1 |
| PPIC-type PPIASE domain   | PF00639 | 1 |
| PPR repeat  | PF12854 | 1 |
| PPR repeat  | PF01535 | 1 |
| PPR repeat family   | PF13041 | 1 |
| PQQ-like domain   | PF13360 | 2 |
| PQQ-like domain   | PF13570 | 1 |
| Predicted ATPase of the ABC class                                     | PF09818 | 1 |
| Prefoldin subunit   | PF01920 | 1 |
| Pregnancy-associated plasma protein-A                                 | PF05572 | 6 |
| PRELI-like family   | PF04707 | 1 |
| Pre-mRNA 3'-end-processing endonuclease polyadenylation factor C-term | PF11718 | 1 |
| pre-mRNA processing factor 4 (PRP4) like                              | PF08799 | 2 |
| Prenylcysteine lyase  | PF07156 | 0 |
| Prion-inhibition and propagation                                      | PF14479 | 3 |
| Probable RNA and SrmB- binding site of polymerase A                   | PF12627 | 1 |
| Prokaryotic phospholipase A2  | PF09056 | 2 |
| Pro-kumamolisin, activation domain                                    | PF09286 | 1 |
| Prolyl oligopeptidase family  | PF00326 | 8 |
| Proprotein convertase P-domain  | PF01483 | 2 |
| Proteasome complex subunit Rpn13 ubiquitin receptor                   | PF04683 | 1 |

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|---------------------------------------|---------|----|
| Proteasome maturation factor UMP1     | PF05348 | 1  |
| Proteasome subunit                    | PF00227 | 1  |
| Protein kinase C terminal domain      | PF00433 | 1  |
| Protein kinase domain                 | PF00069 | 16 |
| Protein of unknown function (DUF1077) | PF06417 | 1  |
| Protein of unknown function (DUF1237) | PF06824 | 1  |
| Protein of unknown function (DUF1295) | PF06966 | 1  |
| Protein of unknown function (DUF1399) | PF07173 | 1  |
| Protein of unknown function (DUF1446) | PF07287 | 1  |
| Protein of unknown function (DUF1479) | PF07350 | 2  |
| Protein of unknown function (DUF1513) | PF07433 | 1  |
| Protein of unknown function (DUF1524) | PF07510 | 2  |
| Protein of unknown function (DUF1565) | PF07602 | 1  |
| Protein of unknown function (DUF1620) | PF07774 | 2  |
| Protein of unknown function (DUF1640) | PF07798 | 1  |
| Protein of unknown function (DUF1682) | PF07946 | 1  |
| Protein of unknown function (DUF1688) | PF07958 | 1  |
| Protein of unknown function (DUF1749) | PF08538 | 1  |
| Protein of unknown function (DUF1762) | PF08574 | 1  |
| Protein of unknown function (DUF1765) | PF08578 | 1  |
| Protein of unknown function (DUF2456) | PF10445 | 1  |
| Protein of unknown function (DUF2638) | PF10937 | 1  |
| Protein of unknown function (DUF2823) | PF11034 | 1  |
| Protein of unknown function (DUF3074) | PF11274 | 1  |
| Protein of unknown function (DUF3128) | PF11326 | 2  |
| Protein of unknown function (DUF3129) | PF11327 | 4  |
| Protein of unknown function (DUF3405) | PF11885 | 3  |
| Protein of unknown function (DUF3419) | PF11899 | 1  |
| Protein of unknown function (DUF3429) | PF11911 | 1  |
| Protein of unknown function (DUF3433) | PF11915 | 2  |
| Protein of unknown function (DUF3435) | PF11917 | 1  |
| Protein of unknown function (DUF3455) | PF11937 | 2  |
| Protein of unknown function (DUF3602) | PF12223 | 1  |

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| Protein of unknown function (DUF3659)                        | PF12396 | 1  |
| Protein of unknown function (DUF3723)                        | PF12520 | 2  |
| Protein of unknown function (DUF3752)                        | PF12572 | 1  |
| Protein of unknown function (DUF3759)                        | PF12585 | 1  |
| Protein of unknown function (DUF3807)                        | PF12720 | 1  |
| Protein of unknown function (DUF3984)                        | PF13136 | 1  |
| Protein of unknown function (DUF410)                         | PF04190 | 1  |
| Protein of unknown function (DUF4243)                        | PF14027 | 1  |
| Protein of unknown function (DUF4448)                        | PF14610 | 3  |
| Protein of unknown function (DUF726)                         | PF05277 | 1  |
| Protein of unknown function (DUF815)                         | PF05673 | 1  |
| Protein of unknown function (DUF861)                         | PF05899 | 1  |
| Protein of unknown function (DUF962)                         | PF06127 | 1  |
| Protein of unknown function DUF45                            | PF01863 | 1  |
| Protein of unknown function, DUF258                          | PF03193 | 4  |
| Protein phosphatase 2C                                       | PF13672 | 2  |
| Protein phosphatase 2C                                       | PF00481 | 3  |
| Protein prenyltransferase alpha subunit repeat               | PF01239 | 1  |
| Protein tyrosine kinase                                      | PF07714 | 13 |
| Protein-arginine deiminase (PAD)                             | PF03068 | 2  |
| Prp31 C terminal domain                                      | PF09785 | 1  |
| PUA domain   | PF01472 | 1  |
| Pumilio-family RNA binding repeat                            | PF00806 | 1  |
| Putative carbohydrate metabolism domain                      | PF13201 | 2  |
| Putative cyclase   | PF04199 | 1  |
| Putative diphthamide synthesis protein                       | PF01866 | 1  |
| Putative exonuclease SbcCD, C subunit                        | PF13558 | 1  |
| Putative Ig domain   | PF05345 | 1  |
| Putative NAD(P)-binding                                      | PF13241 | 1  |
| Putative peptidase family                                    | PF13933 | 1  |
| Putative S-adenosyl-L-methionine-dependent methyltransferase | PF02636 | 1  |
| Putative SAM-dependent methyltransferase                     | PF11312 | 1  |
| Putative serine dehydratase domain                           | PF14031 | 2  |

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| Putative Sin3 binding protein                                     | PF10330 | 1  |
| Putative stress-responsive nuclear envelope protein               | PF10281 | 1  |
| Putative threonine/serine exporter                                | PF06738 | 1  |
| Putative TOS1-like glycosyl hydrolase (DUF2401)                   | PF10287 | 3  |
| Putative zinc finger in N-recognin (UBR box)                      | PF02207 | 1  |
| Putative zinc-finger of transcription factor IIIc complex         | PF12660 | 1  |
| PX domain   | PF00787 | 1  |
| Pyoverdine/dityrosine biosynthesis protein                        | PF05141 | 1  |
| Pyridine nucleotide-disulphide oxidoreductase                     | PF07992 | 15 |
| Pyridine nucleotide-disulphide oxidoreductase                     | PF13738 | 10 |
| Pyridine nucleotide-disulphide oxidoreductase                     | PF00070 | 8  |
| Pyridoxal-phosphate dependent enzyme                              | PF00291 | 1  |
| Pyridoxamine 5'-phosphate oxidase                                 | PF13883 | 1  |
| Pyridoxamine 5'-phosphate oxidase                                 | PF01243 | 1  |
| Pyrroline-5-carboxylate reductase dimerisation                    | PF14748 | 1  |
| Pyruvate flavodoxin/ferredoxin oxidoreductase, thiamine diP-bdg   | PF01855 | 1  |
| Rad17 cell cycle checkpoint protein                               | PF03215 | 3  |
| RanBP1 domain   | PF00638 | 1  |
| Ras family  | PF00071 | 4  |
| Ras of Complex, Roc, domain of DAPkinase                          | PF08477 | 4  |
| RasGAP C-terminus   | PF03836 | 1  |
| RasGEF domain   | PF00617 | 1  |
| RasGEF N-terminal motif   | PF00618 | 1  |
| Receptor L domain   | PF01030 | 1  |
| RecF/RecN/SMC N terminal domain                                   | PF02463 | 4  |
| Redoxin   | PF08534 | 1  |
| Region in Clathrin and VPS  | PF00637 | 1  |
| Regulator of chromosome condensation (RCC1) repeat                | PF00415 | 1  |
| Regulator of chromosome condensation (RCC1) repeat                | PF13540 | 1  |
| Regulator of volume decrease after cellular swelling              | PF03517 | 1  |
| Repair protein Rad1/Rec1/Rad17                                    | PF02144 | 1  |
| Repeat domain in Vibrio, Colwellia, Bradyrhizobium and Shewanella | PF13517 | 4  |
| Replication factor C C-terminal domain                            | PF08542 | 2  |



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| Replication factor RFC1 C terminal domain            | PF08519 | 1 |
| Reprolysin (M12B) family zinc metalloprotease        | PF01421 | 1 |
| Rer1 family  | PF03248 | 1 |
| Retinal pigment epithelial membrane protein          | PF03055 | 1 |
| Reverse transcriptase (RNA-dependent DNA polymerase) | PF07727 | 1 |
| Reverse transcriptase (RNA-dependent DNA polymerase) | PF00078 | 1 |
| RF-1 domain  | PF00472 | 2 |
| Rhamnogalacturonan lyase B, N-terminal               | PF09284 | 1 |
| Rhodanese-like domain                                | PF00581 | 1 |
| RhoGAP domain  | PF00620 | 1 |
| RhoGEF domain  | PF00621 | 1 |
| ribonuclease   | PF00545 | 2 |
| Ribonuclease III domain                              | PF00636 | 1 |
| Ribonuclease T2 family                               | PF00445 | 2 |
| Ribonuclease-III-like                                | PF14622 | 1 |
| Ribonucleotide reductase, small chain                | PF00268 | 2 |
| Ribophorin I   | PF04597 | 1 |
| Ribosomal L29 protein                                | PF00831 | 1 |
| Ribosomal L29e protein family                        | PF01779 | 1 |
| Ribosomal L37ae protein family                       | PF01780 | 1 |
| ribosomal L5P family C-terminus                      | PF00673 | 1 |
| Ribosomal protein L16p/L10e                          | PF00252 | 1 |
| Ribosomal protein L19e                               | PF01280 | 1 |
| Ribosomal protein L22p/L17e                          | PF00237 | 1 |
| Ribosomal protein L24e                               | PF01246 | 1 |
| Ribosomal protein L3                                 | PF00297 | 1 |
| Ribosomal protein L44                                | PF00935 | 1 |
| Ribosomal protein L6e                                | PF01159 | 1 |
| Ribosomal protein L7Ae/L30e/S12e/Gadd45 family       | PF01248 | 2 |
| Ribosomal protein S17                                | PF00366 | 1 |
| Ribosomal protein S19                                | PF00203 | 1 |
| Ribosomal protein S21e                               | PF01249 | 1 |
| Ribosomal protein S5, C-terminal domain              | PF03719 | 1 |

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| Ribosomal protein S5, N-terminal domain                        | PF00333 | 1 |
| Ribosomal protein S6e  | PF01092 | 2 |
| Ribosomal protein S8   | PF00410 | 1 |
| Ribosomal protein S8e  | PF01201 | 1 |
| Ribosomal proteins 50S-L15, 50S-L18e, 60S-L27A                 | PF00828 | 1 |
| Ribosome biogenesis protein SLX9                               | PF15341 | 1 |
| RIC1   | PF07064 | 1 |
| Ricin-type beta-trefoil lectin domain                          | PF00652 | 2 |
| Right handed beta helix region                                 | PF13229 | 8 |
| Ring finger domain   | PF13639 | 7 |
| RING-H2 zinc finger domain                                     | PF12678 | 3 |
| RING-type zinc-finger  | PF13445 | 1 |
| RING-variant domain  | PF12906 | 2 |
| Rix1 complex component involved in 60S ribosome maturation     | PF12333 | 1 |
| RmlD substrate binding domain                                  | PF04321 | 1 |
| RNA binding motif  | PF08777 | 1 |
| RNA cap guanine-N2 methyltransferase                           | PF09445 | 2 |
| RNA dependent RNA polymerase                                   | PF05183 | 1 |
| RNA pol II promoter Fmp27 protein domain                       | PF10359 | 1 |
| RNA pol II promoter Fmp27 protein domain                       | PF10347 | 1 |
| RNA pol II promoter Fmp27 protein domain                       | PF10305 | 1 |
| RNA polymerase I specific transcription initiation factor RRN3 | PF05327 | 1 |
| RNA polymerase Rpb1, domain 1                                  | PF04997 | 1 |
| RNA polymerase Rpb1, domain 2                                  | PF00623 | 1 |
| RNA polymerase Rpb1, domain 3                                  | PF04983 | 1 |
| RNA polymerase Rpb1, domain 4                                  | PF05000 | 1 |
| RNA polymerase Rpb1, domain 5                                  | PF04998 | 1 |
| RNA polymerase Rpb3/Rpb11 dimerisation domain                  | PF01193 | 1 |
| RNA polymerase Rpb3/RpoA insert domain                         | PF01000 | 1 |
| RNA polymerase Rpb4  | PF03874 | 2 |
| RNA polymerase Rpb8  | PF03870 | 1 |
| RNA polymerases N / 8 kDa subunit                              | PF01194 | 1 |
| RNA recognition motif 2  | PF04059 | 1 |

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|---|---------|---|
| RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain) | PF00076 | 9 |
| RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain) | PF13893 | 8 |
| RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain) | PF14259 | 7 |
| RNA12 protein   | PF10443 | 2 |
| RNase P subunit Pop3                                    | PF08228 | 1 |
| RNB domain  | PF00773 | 1 |
| RPAP1-like, C-terminal                                  | PF08620 | 1 |
| RPAP1-like, N-terminal                                  | PF08621 | 1 |
| rRNA processing/ribosome biogenesis                     | PF08167 | 1 |
| RTA1 like protein                                       | PF04479 | 2 |
| RTC4-like domain  | PF14474 | 1 |
| RWD domain  | PF05773 | 1 |
| S1 RNA binding domain                                   | PF00575 | 1 |
| S1/P1 Nuclease  | PF02265 | 3 |
| SAC3/GANP family  | PF03399 | 1 |
| Saccharopine dehydrogenase NADP binding domain          | PF03435 | 1 |
| SacI homology domain                                    | PF02383 | 2 |
| SAD/SRA domain  | PF02182 | 1 |
| Sad1 / UNC-like C-terminal                              | PF07738 | 1 |
| SAM domain (Sterile alpha motif)                        | PF07647 | 1 |
| SAM domain (Sterile alpha motif)                        | PF00536 | 1 |
| SAP domain  | PF02037 | 1 |
| Sas10/Utp3/C1D family                                   | PF04000 | 1 |
| SCA7, zinc-binding domain                               | PF08313 | 1 |
| Scytalone dehydratase                                   | PF02982 | 1 |
| Sds3-like   | PF08598 | 2 |
| Sec61beta family  | PF03911 | 1 |
| Sec7 domain   | PF01369 | 1 |
| Secretory lipase  | PF03583 | 1 |
| Secretory pathway protein Sec39                         | PF08314 | 1 |
| Sedlin, N-terminal conserved region                     | PF04628 | 2 |
| Sell repeat   | PF08238 | 1 |
| Semialdehyde dehydrogenase, NAD binding domain          | PF01118 | 2 |

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| Septin   | PF00735 | 2  |
| Serine aminopeptidase, S33   | PF12146 | 2  |
| Serine carboxypeptidase  | PF00450 | 7  |
| Serine carboxypeptidase S28  | PF05577 | 2  |
| Serine hydrolase (FSH1)  | PF03959 | 1  |
| Serine hydroxymethyltransferase                                      | PF00464 | 1  |
| Serine-threonine protein kinase 19                                   | PF10494 | 1  |
| Ser-Thr-rich glycosyl-phosphatidyl-inositol-anchored membrane family | PF10342 | 4  |
| SET domain   | PF00856 | 6  |
| SH3 domain   | PF00018 | 5  |
| Shikimate kinase   | PF01202 | 2  |
| short chain dehydrogenase  | PF00106 | 14 |
| SHR-binding domain of vacuolar-sorting associated protein 13         | PF06650 | 1  |
| SHS2 domain found in N terminus of Rpb7p/Rpc25p/MJ0397               | PF03876 | 1  |
| Sigma-54 interaction domain  | PF00158 | 1  |
| Signal recognition particle 9 kDa protein (SRP9)                     | PF05486 | 2  |
| Signal recognition particle receptor beta subunit                    | PF09439 | 2  |
| Sin3 family co-repressor   | PF08295 | 1  |
| Sirohaem biosynthesis protein central                                | PF14824 | 1  |
| Sirohaem biosynthesis protein C-terminal                             | PF14823 | 1  |
| SIS domain   | PF01380 | 1  |
| SIT4 phosphatase-associated protein                                  | PF04499 | 1  |
| Slx4 endonuclease  | PF09494 | 1  |
| SMC proteins Flexible Hinge Domain                                   | PF06470 | 1  |
| SMP-30/Gluconolactonase/LRE-like region                              | PF08450 | 1  |
| Snare region anchored in the vesicle membrane C-terminus             | PF12352 | 1  |
| SNF2 family N-terminal domain  | PF00176 | 3  |
| Snf7   | PF03357 | 2  |
| SnoaL-like domain  | PF13577 | 2  |
| snoRNA binding domain, fibrillarin                                   | PF01798 | 1  |
| Sodium Bile acid symporter family                                    | PF01758 | 1  |
| Sodium:dicarboxylate symporter family                                | PF00375 | 1  |
| Something about silencing, SAS, complex subunit 4                    | PF15460 | 1  |

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| SOS response associated peptidase (SRAP)                            | PF02586 | 1  |
| Spa2 homology domain (SHD) of GIT                                   | PF08518 | 1  |
| Spc7 kinetochore protein  | PF08317 | 1  |
| Spc7_C2   | PF15577 | 1  |
| SPFH domain / Band 7 family   | PF01145 | 1  |
| Spherulation-specific family 4                                      | PF12138 | 1  |
| Sphingolipid Delta4-desaturase (DES)                                | PF08557 | 1  |
| Splicing factor 3B subunit 1  | PF08920 | 1  |
| SPX domain  | PF03105 | 1  |
| SRF-type transcription factor (DNA-binding and dimerisation domain) | PF00319 | 1  |
| SRI (Set2 Rpb1 interacting) domain                                  | PF08236 | 1  |
| Ssl1-like   | PF04056 | 1  |
| Ssu72-like protein  | PF04722 | 1  |
| Stage II sporulation protein E (SpoIIE)                             | PF07228 | 2  |
| Starch binding domain   | PF00686 | 3  |
| STAS domain   | PF01740 | 1  |
| Stc1 domain   | PF12898 | 1  |
| STE like transcription factor                                       | PF02200 | 1  |
| Sterol methyltransferase C-terminal                                 | PF08498 | 2  |
| Stigma-specific protein, Stig1                                      | PF04885 | 3  |
| Stress responsive A/B Barrel Domain                                 | PF07876 | 1  |
| Stretch-activated Ca <sup>2+</sup> -permeable channel component     | PF12929 | 1  |
| Subtilase family  | PF00082 | 18 |
| Sugar (and other) transporter                                       | PF00083 | 8  |
| Sugar-binding cellulase-like  | PF12876 | 7  |
| Sugar-transporters, 12 TM   | PF05631 | 1  |
| Sulfatase   | PF00884 | 2  |
| Sulfate permease family   | PF00916 | 1  |
| Suppressor of forked protein (Suf)                                  | PF05843 | 2  |
| SUR7/PalI family  | PF06687 | 1  |
| Surfeit locus protein 6   | PF04935 | 1  |
| Survival protein SurE   | PF01975 | 1  |
| Sybindin-like family  | PF04099 | 1  |

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|--|---------|---|
| SYF2 splicing factor                             | PF08231 | 1 |
| Synaptobrevin                                    | PF00957 | 1 |
| TAFII55 protein conserved region                 | PF04658 | 1 |
| Tannase and feruloyl esterase                    | PF07519 | 4 |
| Taurine catabolism dioxygenase TauD, TfdA family | PF02668 | 2 |
| TCP-1/cpn60 chaperonin family                    | PF00118 | 3 |
| TEA/ATTS domain family                           | PF01285 | 1 |
| Tetratricopeptide repeat                         | PF13428 | 7 |
| Tetratricopeptide repeat                         | PF00515 | 5 |
| Tetratricopeptide repeat                         | PF14559 | 3 |
| Tetratricopeptide repeat                         | PF13432 | 4 |
| Tetratricopeptide repeat                         | PF07719 | 6 |
| Tetratricopeptide repeat                         | PF13181 | 3 |
| Tetratricopeptide repeat                         | PF13431 | 4 |
| Tetratricopeptide repeat                         | PF13371 | 3 |
| Tetratricopeptide repeat                         | PF13176 | 3 |
| Tetratricopeptide repeat                         | PF13429 | 3 |
| Tetratricopeptide repeat                         | PF13174 | 2 |
| Tetratricopeptide repeat                         | PF13424 | 4 |
| Tetratricopeptide repeat                         | PF14561 | 1 |
| Tetratricopeptide repeat                         | PF13374 | 1 |
| TFIIS helical bundle-like domain                 | PF08711 | 1 |
| Thi4 family                                      | PF01946 | 4 |
| Thiamine-binding protein                         | PF01910 | 1 |
| ThiF family                                      | PF00899 | 1 |
| Thioesterase domain                              | PF00975 | 1 |
| Thioesterase superfamily                         | PF03061 | 1 |
| Thioesterase-like superfamily                    | PF13622 | 1 |
| Thioesterase-like superfamily                    | PF13279 | 1 |
| Thiolase, C-terminal domain                      | PF02803 | 1 |
| Thiolase, N-terminal domain                      | PF00108 | 3 |
| Thioredoxin                                      | PF00085 | 4 |
| Thioredoxin                                      | PF14595 | 0 |

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|---|---------|---|
| Thioredoxin-like                                      | PF13905 | 4 |
| Thioredoxin-like                                      | PF13899 | 1 |
| Thioredoxin-like domain                               | PF13848 | 3 |
| Thioredoxin-like domain                               | PF13098 | 2 |
| THO complex subunit 1 transcription elongation factor | PF11957 | 1 |
| Threonine/Serine exporter, ThrE                       | PF12821 | 1 |
| Tim17/Tim22/Tim23/Pmp24 family                        | PF02466 | 1 |
| TIP49 C-terminus                                      | PF06068 | 1 |
| TLC domain  | PF03798 | 1 |
| Toprim domain   | PF01751 | 1 |
| TPR repeat  | PF13414 | 8 |
| TRAF-type zinc finger                                 | PF02176 | 1 |
| TRAM1-like protein                                    | PF08390 | 1 |
| Transcription factor III C subunit delta N-term       | PF12657 | 1 |
| Transcription factor S-II (TFIIS)                     | PF01096 | 1 |
| Transcription factor S-II (TFIIS), central domain     | PF07500 | 1 |
| Transcription factor TFIID complex subunit 8 C-term   | PF10406 | 1 |
| Transcription factor TFIID complex subunit Tfb5       | PF06331 | 1 |
| Transferase family                                    | PF02458 | 1 |
| Transferrin receptor-like dimerisation domain         | PF04253 | 2 |
| Transglutaminase-like superfamily                     | PF13369 | 1 |
| Transient receptor potential (TRP) ion channel        | PF06011 | 3 |
| Transketolase, C-terminal domain                      | PF02780 | 1 |
| Transketolase, pyrimidine binding domain              | PF02779 | 1 |
| Transketolase, thiamine diphosphate binding domain    | PF00456 | 1 |
| Translation initiation factor eIF3 subunit            | PF08597 | 1 |
| Translation initiation factor eIF3 subunit 135        | PF12807 | 1 |
| Translation initiation factor SUI1                    | PF01253 | 2 |
| Translation-initiation factor 2                       | PF11987 | 1 |
| Translin family                                       | PF01997 | 1 |
| Translocon-associated protein (TRAP), alpha subunit   | PF03896 | 1 |
| Transmembrane amino acid transporter protein          | PF01490 | 2 |
| Trehalase   | PF01204 | 2 |

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|---|---------|---|
| Trimerisation motif                                   | PF08954 | 1 |
| tRNA pseudouridine synthase                           | PF01416 | 2 |
| tRNA synthetases class I (W and Y)                    | PF00579 | 2 |
| Trypsin   | PF00089 | 2 |
| Tryptophan halogenase                                 | PF04820 | 2 |
| Tubulin C-terminal domain                             | PF03953 | 1 |
| Tubulin domain  | PF14881 | 1 |
| Tubulin/FtsZ family, GTPase domain                    | PF00091 | 2 |
| Tuftelin interacting protein N terminal               | PF12457 | 1 |
| twin BRCT domain                                      | PF12738 | 1 |
| Type I phosphodiesterase / nucleotide pyrophosphatase | PF01663 | 1 |
| Type II/IV secretion system protein                   | PF00437 | 1 |
| Type III restriction enzyme, res subunit              | PF04851 | 3 |
| U3 small nucleolar RNA-associated protein 6           | PF08640 | 1 |
| U3 snoRNA associated                                  | PF08297 | 1 |
| UAA transporter family                                | PF08449 | 1 |
| UBA/TS-N domain                                       | PF00627 | 2 |
| ubiE/COQ5 methyltransferase family                    | PF01209 | 7 |
| Ubiquitin 3 binding protein But2 C-terminal domain    | PF09792 | 1 |
| Ubiquitin carboxyl-terminal hydrolase                 | PF13423 | 3 |
| Ubiquitin carboxyl-terminal hydrolase                 | PF00443 | 3 |
| Ubiquitin carboxyl-terminal hydrolase, family 1       | PF01088 | 1 |
| Ubiquitin elongating factor core                      | PF10408 | 1 |
| Ubiquitin family                                      | PF00240 | 4 |
| Ubiquitin fusion degradation protein UFD1             | PF03152 | 1 |
| Ubiquitin-2 like Rad60 SUMO-like                      | PF11976 | 1 |
| Ubiquitin-2 like Rad60 SUMO-like                      | PF13881 | 1 |
| Ubiquitin-conjugating enzyme                          | PF00179 | 3 |
| Ubiquitin-like autophagy protein Apg12                | PF04110 | 1 |
| U-box domain  | PF04564 | 2 |
| UBX domain  | PF00789 | 1 |
| UDP-glucuronosyl and UDP-glucosyl transferase         | PF00201 | 1 |
| UDP-glucose 4-epimerase C-term subunit                | PF13950 | 1 |



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|---|---------|----|
| UDP-glucose:Glycoprotein Glucosyltransferase            | PF06427 | 0  |
| Ulp1 protease family, C-terminal catalytic domain       | PF02902 | 1  |
| Uncharacterised ACR, YagE family COG1723                | PF02582 | 1  |
| Uncharacterised protein family UPF0052                  | PF01933 | 1  |
| Uncharacterized ACR, YdiU/UPF0061 family                | PF02696 | 1  |
| Uncharacterized alpha/beta hydrolase domain (DUF2235)   | PF09994 | 1  |
| Uncharacterized protein conserved in bacteria (DUF2264) | PF10022 | 1  |
| Up-frameshift suppressor 2                              | PF04050 | 1  |
| Uracil phosphoribosyltransferase                        | PF14681 | 1  |
| Urease alpha-subunit, N-terminal domain                 | PF00449 | 1  |
| Urease beta subunit                                     | PF00699 | 1  |
| Urease, gamma subunit                                   | PF00547 | 1  |
| UTP--glucose-1-phosphate uridylyltransferase            | PF01704 | 1  |
| Vacuolar 14 Fab1-binding region                         | PF12755 | 3  |
| Vacuolar ATP synthase subunit S1 (ATP6S1)               | PF05827 | 1  |
| Vacuolar protein sorting protein 11 C terminal          | PF12451 | 1  |
| Vacuolar protein sorting-associated protein 35          | PF03635 | 1  |
| Vacuolar segregation subunit 7                          | PF12751 | 1  |
| Vacuolar sorting 38 and autophagy-related subunit 14    | PF10186 | 1  |
| Vacuolar sorting protein 9 (VPS9) domain                | PF02204 | 1  |
| Variant SH3 domain                                      | PF14604 | 4  |
| Variant SH3 domain                                      | PF07653 | 4  |
| VHS domain  | PF00790 | 1  |
| Vitamin B6 photo-protection and homeostasis             | PF04884 | 1  |
| Vitamin-D-receptor interacting Mediator subunit 4       | PF10018 | 1  |
| Voltage gated chloride channel                          | PF00654 | 1  |
| Voltage-dependent anion channel                         | PF03595 | 1  |
| von Willebrand factor type A domain                     | PF13519 | 1  |
| von Willebrand factor type A domain                     | PF00092 | 1  |
| Vps5 C terminal like                                    | PF09325 | 1  |
| Vta1 like   | PF04652 | 1  |
| V-type ATPase 116kDa subunit family                     | PF01496 | 1  |
| WD domain, G-beta repeat                                | PF00400 | 14 |

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|--|---------|----|
| WD40-like Beta Propeller Repeat                                | PF07676 | 1  |
| WH2 motif  | PF02205 | 1  |
| WLM domain   | PF08325 | 1  |
| WSC domain   | PF01822 | 15 |
| WW domain  | PF00397 | 1  |
| X8 domain  | PF07983 | 1  |
| XFP C-terminal domain  | PF09363 | 1  |
| XFP N-terminal domain  | PF09364 | 1  |
| XPG I-region   | PF00867 | 2  |
| XPG N-terminal domain  | PF00752 | 2  |
| Xylanase inhibitor C-terminal                                  | PF14541 | 1  |
| Xylanase inhibitor N-terminal                                  | PF14543 | 5  |
| Xylose isomerase-like TIM barrel                               | PF01261 | 1  |
| Yeast cortical protein KAR9                                    | PF08580 | 1  |
| Yeast mitochondrial distribution and morphology (MDM) proteins | PF08118 | 1  |
| YEATS family   | PF03366 | 1  |
| Yippee zinc-binding/DNA-binding /Mis18, centromere assembly    | PF03226 | 1  |
| Zeta toxin   | PF06414 | 1  |
| Zinc carboxypeptidase  | PF00246 | 14 |
| Zinc finger C-x8-C-x5-C-x3-H type (and similar)                | PF00642 | 1  |
| zinc finger of C3HC4-type, RING                                | PF15227 | 1  |
| Zinc finger, C2H2 type   | PF00096 | 3  |
| Zinc finger, C3HC4 type (RING finger)                          | PF00097 | 8  |
| Zinc finger, C3HC4 type (RING finger)                          | PF13923 | 2  |
| Zinc finger, C3HC4 type (RING finger)                          | PF13920 | 2  |
| Zinc-binding   | PF12907 | 2  |
| Zinc-binding dehydrogenase                                     | PF00107 | 4  |
| Zinc-finger double domain                                      | PF13465 | 3  |
| zinc-RING finger domain  | PF14634 | 2  |
| Zn-dependent metallo-hydrolase RNA specificity domain          | PF07521 | 1  |

