**Table 2: Gene expressions, median fold change and statistical analyses of GWAS identified genes and MTORC1-associated genes in the discovery cohort**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Post Hoc tests |
| Marker | **Group** | **Mean ΔCT ±SD** | **Median Fold Change** | **Multiple comparison**† | Post hoc KC vs. HC‡ | Post hocKC vs. DG‡ | Post hocDG vs HC‡ | Post hocHC vs. KC+DG† | Post hocKC vs. HC+DG† |
| *FOXO1* | HC DGKC | 43.26 ± 23.0060.52 ± 77.7450.96 ± 34.58 | *0.000**0.000**0.000* | *0.783* | *-* | *-* | *-* | *-* | *-* |
| *FNDC3B* | HC DGKC | 12.79 ± 15.2422.75 ± 18.6639.32 ± 29.19 | *0.009**0.000**0.000* | *0.021\** | *0.150* | *0.220* | *0.766* | *0.011\** | *0.044* |
| *PDGFRA* | HC DGKC | 50.89 ± 76.2339.64 ± 62.21336.99 ± 464.68 | *0.000**0.000**0.000* | *0.001\*\** | *0.304* | *0.086* | *0.998* | *< 0.001\*\** | *0.143* |
| *FRAP1/ MTOR* | HCDGKC | 4.299 ± 0.6372.754 ± 0.9701.813 ± 0.966 | *0.048**0.148**0.313* | *0.005\** | *0.004\** | *0.182* | *0.081* | *0.005\** | *0.013\** |
|  |  |  |  |  |  |  |  |  |  |
| *AKT1* | HCDGKC | 2.130 ± 0.926-1.713 ± 0.514-1.901 ± 0.738 | *0.159**3.638**3.950* | *< 0.001\*\** | *< 0.001\*\** | *0.843* | *< 0.001\*\** | *< 0.001\*\** | *0.047* |
| *DEPTOR* | HCDG KC | 5.971 ± 0.7322.308 ± 0.8833.751 ± 0.635  | *0.015**0.190**0.074* | *< 0.001\*\** | *0.006\** | *0.026* | *< 0.001\*\** | *0.001\*\** | *0.815* |
| *IGF1* | HCDGKC | 9.513 ± 2.2572.815 ± 1.3084.887 ± 0.472 | *0.002**0.084**0.033* | *< 0.001\*\** | *0.005\** | *0.124* | *< 0.001\*\** | *< 0.001\*\** | *0.826* |
| *IGF1R* | HCDGKC | 0.681 ± 1.040-3.704 ± 0.737-3.952 ± 0.956 | *0.621**14.470**12.676* | *< 0.001\*\** | *< 0.001\** | *0.837* | *< 0.001\*\** | *< 0.001\*\** | *0.049* |
| *RAPTOR* | HCDG KC | 6.565 ± 0.3463.699 ± 1.7293.955 ± 0.308  | *0.012**0.075**0.058* | *0.010\** | *0.018\** | *0.927* | *0.014\** | *0.002\*\** | *0.306* |
| *RICTOR* | HC DGKC | 2.755 ± 0.5804.363 ± 0.5963.732 ± 1.241 | *0.169**0.044**0.069* | *0.109* | *-* | *-* | *-* | *-* | *-* |
| GWAS: Genome Wide Association Study, see references 7,8,9. MTORC1: Mammalian Target Of Rapamycin Complex 1. ΔCT: delta cycle threshold. SD: standard deviation. HC: healthy control. DG: decompensated graft/diseased control. KC: keratoconus. \*: significance < 0.05, \*\*: significance <0.002 (corrected for multiple testing). †: One-way ANOVA in normal distributions and Kruskal-Wallis for non-normal distribution. ‡: post-hoc Tukey.V-Akt Murine Thymoma Viral Oncogene Homolog 1 *(AKT1),* DEP domain containing MTOR-interacting protein *(DEPTOR),* fibronectin type III domain containing 3B *(FNDC3B),* Forkhead Box O1 *(FOXO1),* Insulin-Like Growth Factor 1 *(IGF1),* Insulin-Like Growth Factor 1 Receptor *(IGF1R),* Mammalian Target Of Rapamycin *(MTOR),* Platelet Derived Growth Factor Receptor Alpha *(PDGFRA),* Rapamycin-Insensitive Companion Of MTOR *(RICTOR),* Regulatory Associated Protein Of MTOR *(RAPTOR).* |