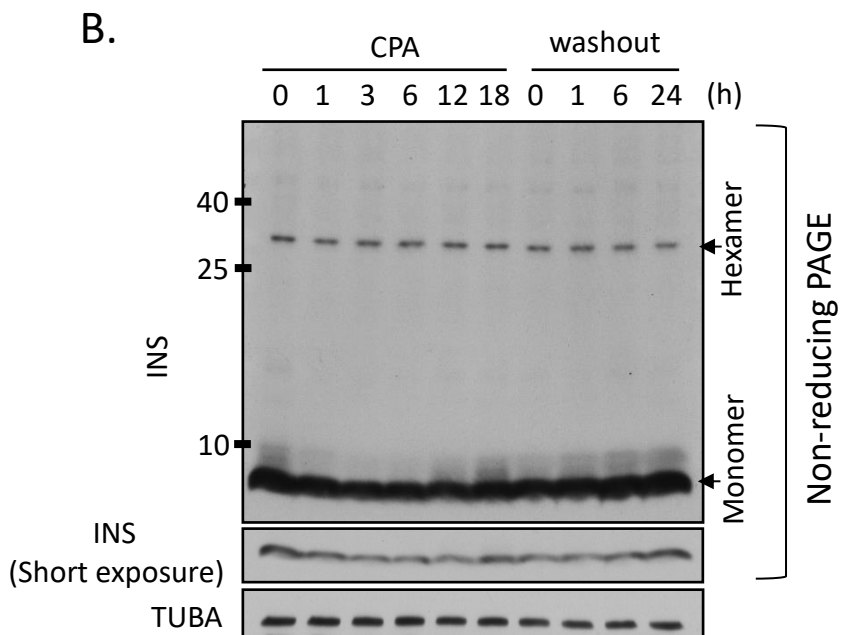
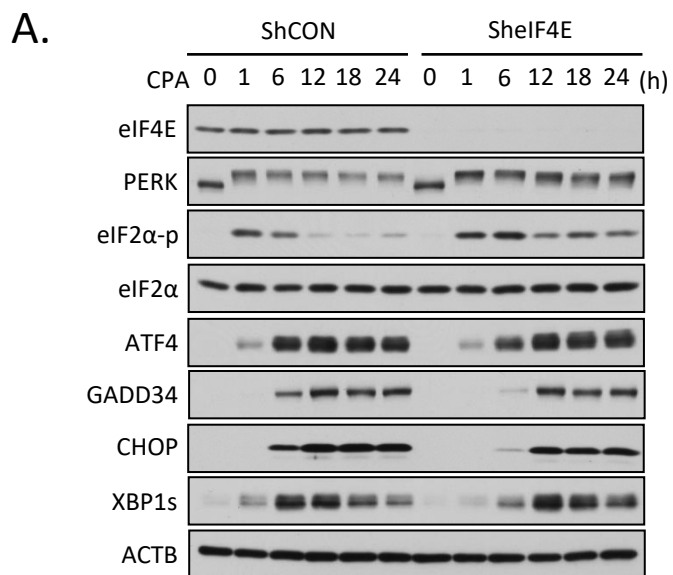
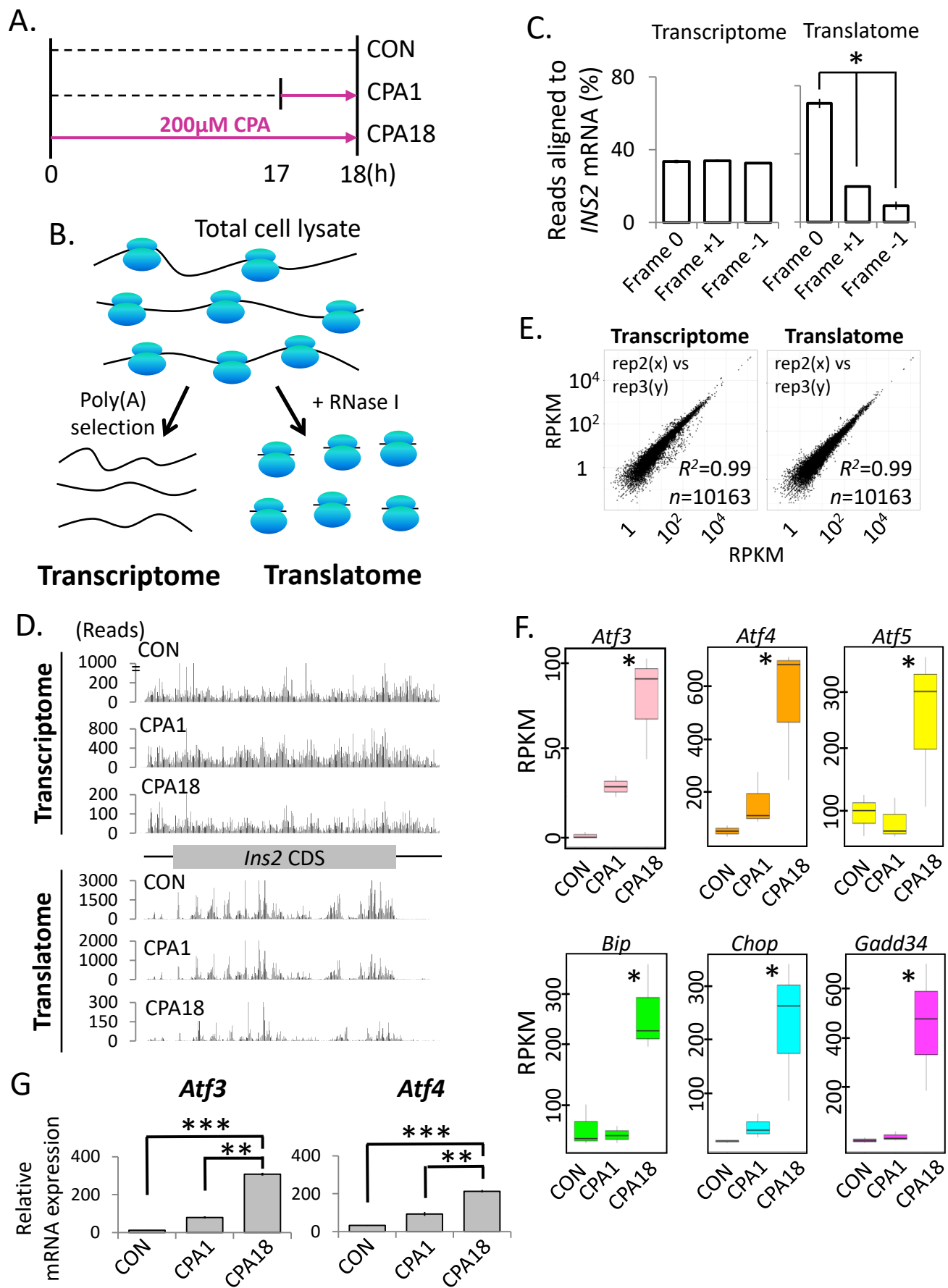


# Supplementary Figure 1. Related to Figure 1.

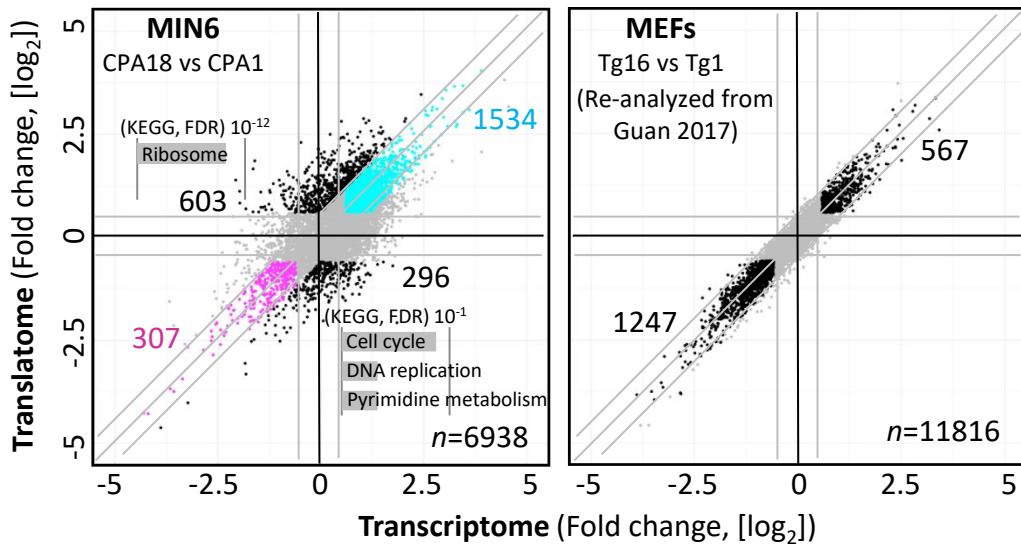


# Supplementary Figure 2. Related to Figure 3.



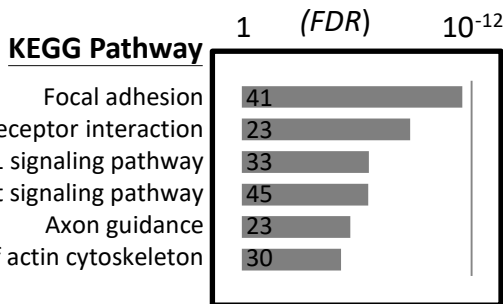
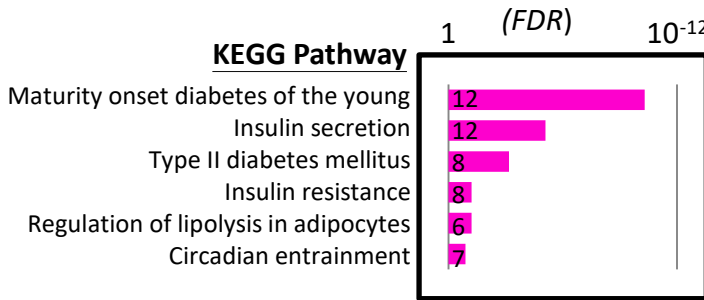
# Supplementary Figure 3. Related to Figure 4.

A.



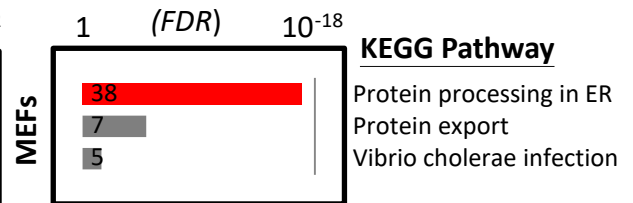
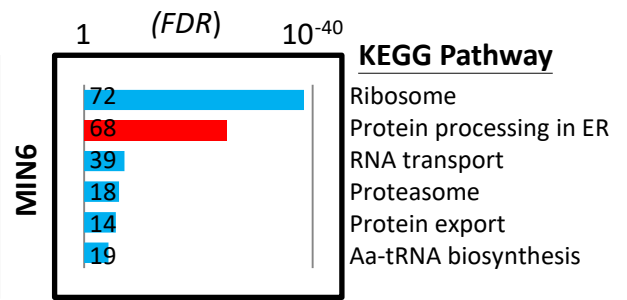
B.

Down-regulation during chronic adaptation



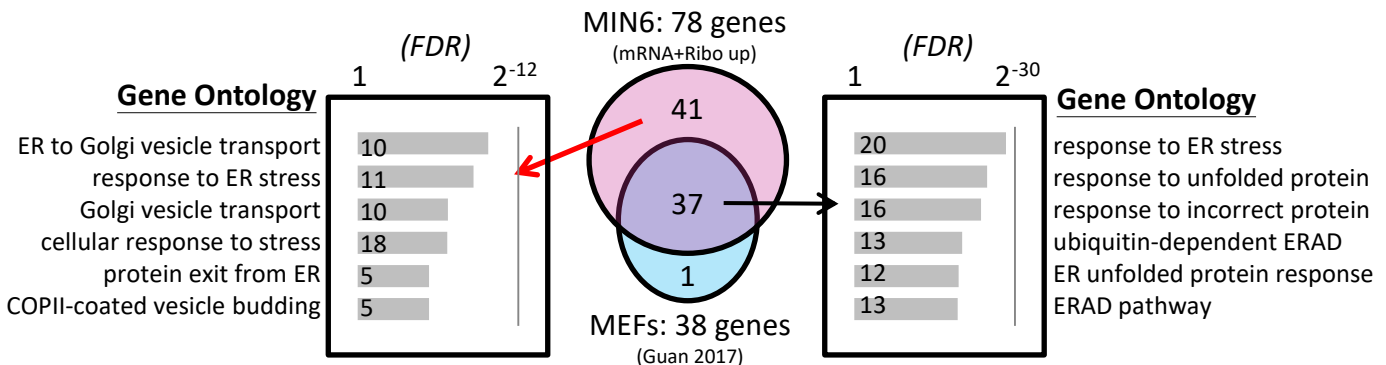
C.

Up-regulation during chronic adaptation

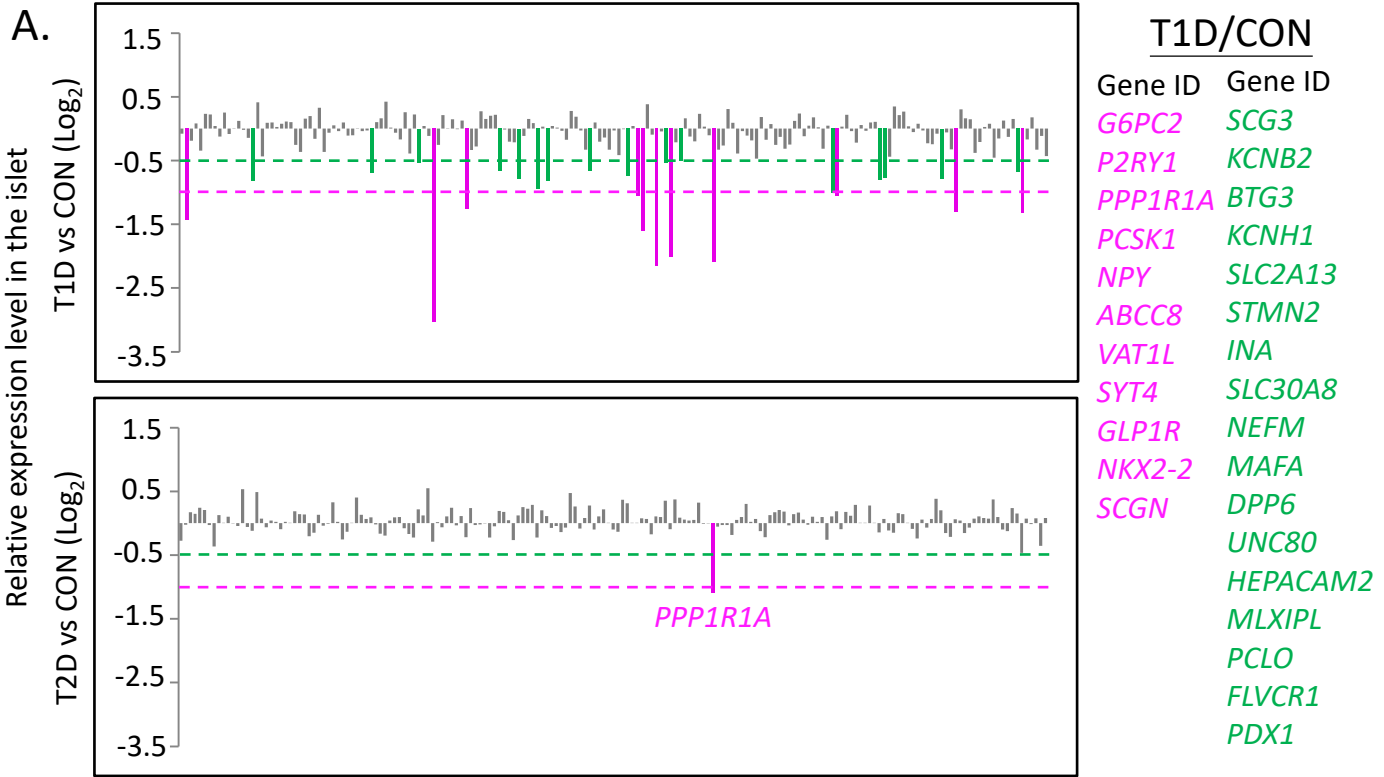


D.

**KEGG: Protein processing in ER -> Gene Ontology in Biological Process**

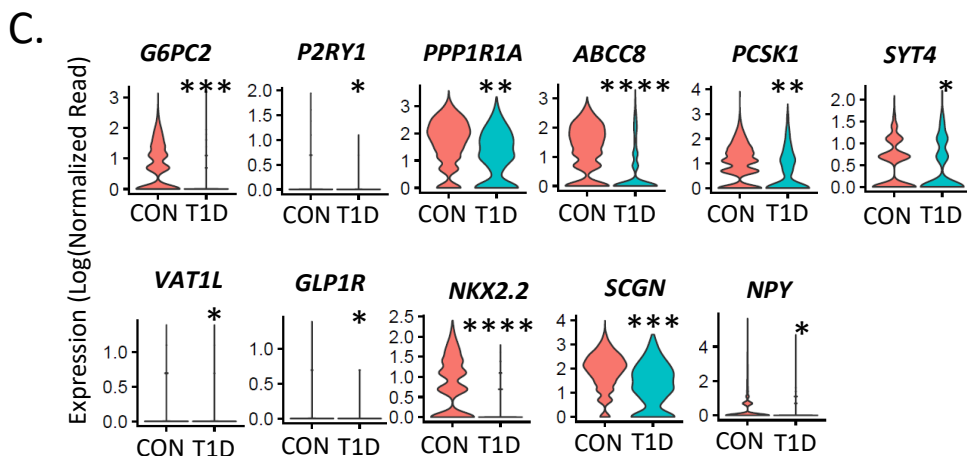


# Supplementary Figure 4. Related to Figure 6.



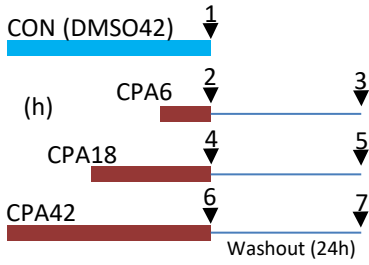
**B.**

PancDB No.	Age	Sex	T1D duration	$\alpha$ cell (%)	$\beta$ cell (%)	$\delta$ cell (%)	Pp cell (%)	Acinar cell (%)	Duct cell (%)	Others (%)
HPAP019	24	M	ND	874 (21.51)	1278 (31.45)	26 (0.64)	822 (20.23)	613 (15.08)	249 (6.13)	202 (4.97)
HPAP022	37	F	ND	511 (13.74)	1069 (28.75)	70 (1.88)	73 (1.96)	380 (10.22)	1097 (29.51)	518 (13.93)
HPAP024	18	M	ND	126 (6.78)	1106 (59.59)	278 (14.98)	50 (2.69)	165 (8.89)	24 (1.29)	107 (5.77)
HPAP026	24	M	ND	200 (35.53)	94 (16.7)	60 (10.66)	37 (6.57)	66 (11.72)	49 (8.7)	57 (10.12)
HPAP029	23	M	ND	440 (19.51)	423 (18.76)	352 (15.61)	75 (3.33)	192 (8.51)	406 (18)	367 (16.27)
HPAP020	14	M	5 days	4319 (49.98)	1055 (12.21)	116 (1.34)	62 (0.72)	2229 (25.8)	629 (7.28)	231 (2.67)
HPAP021	13	F	7 years	1526 (32.18)	812 (17.12)	44 (0.93)	0 (0)	1780 (37.54)	509 (10.73)	71 (1.5)
HPAP023	17	F	7 years	300 (34.92)	86 (10.01)	10 (1.16)	1 (0.12)	215 (25.03)	171 (19.91)	76 (8.85)
HPAP028	4	M	3 years	861 (20.59)	1407 (33.64)	394 (9.42)	31 (0.74)	365 (8.73)	735 (17.58)	389 (9.3)
HPAP032	10	F	3 years	538 (22.63)	942 (39.67)	468 (19.69)	0 (0)	217 (9.13)	47 (1.98)	165 (6.94)
HPAP055	24	M	7 years	58 (3.25)	77 (4.32)	793 (44.5)	2 (0.11)	77 (4.32)	569 (31.93)	206 (11.56)

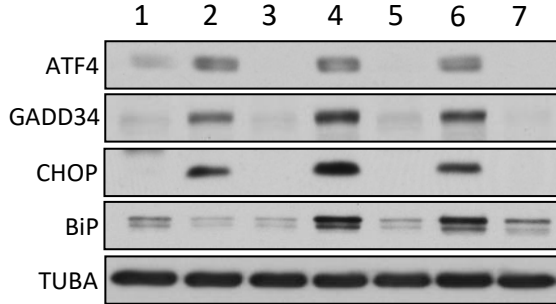


# Supplementary Figure 5. Related to Figure 7.

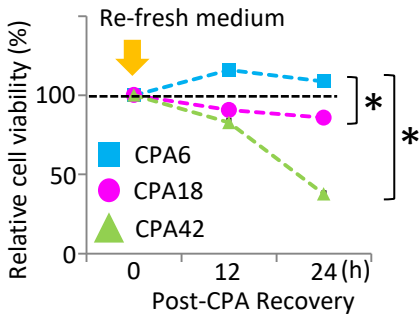
A.



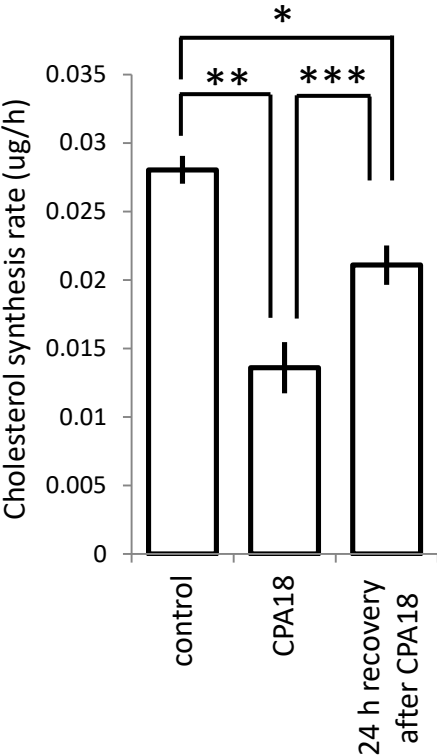
B.



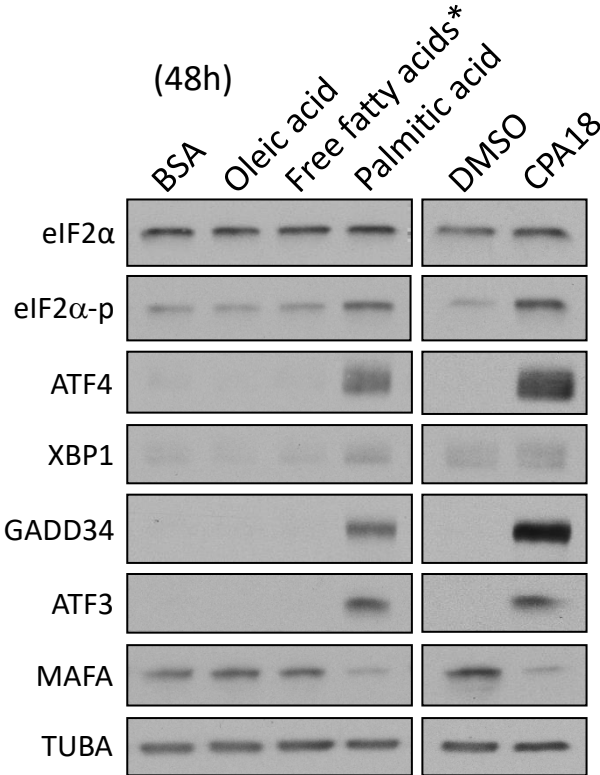
C.



Supplementary Figure 6.



Supplementary Figure 7.



\*. Palmitic acid : Oleic acid = 2:1