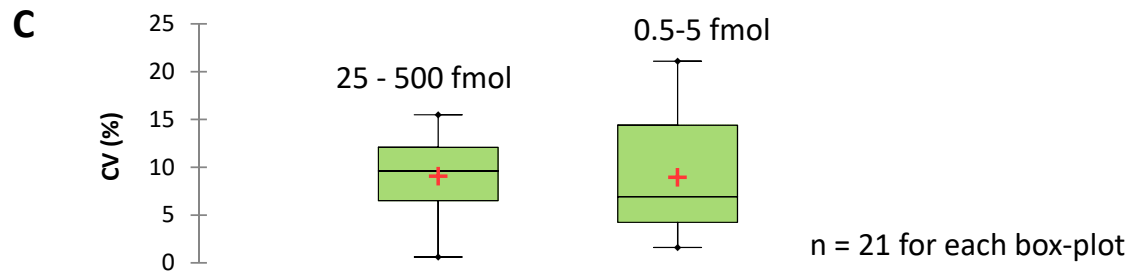
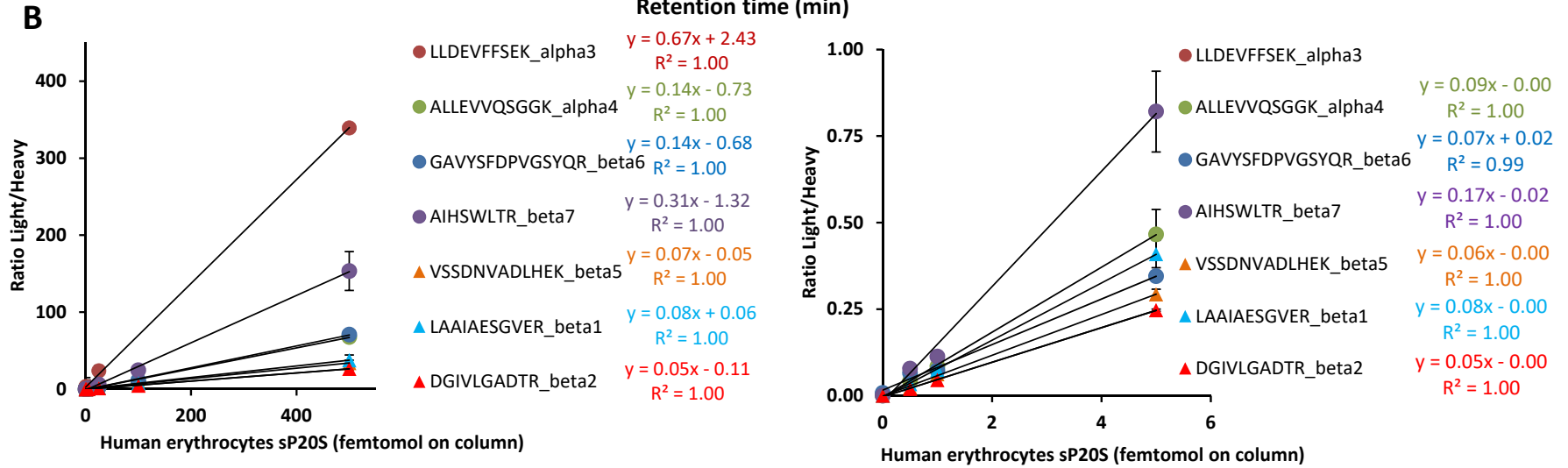
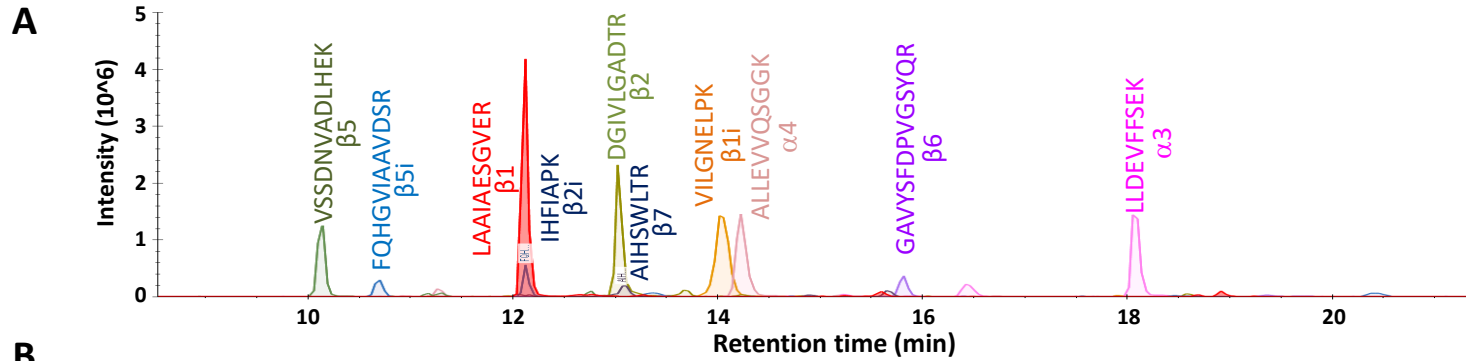
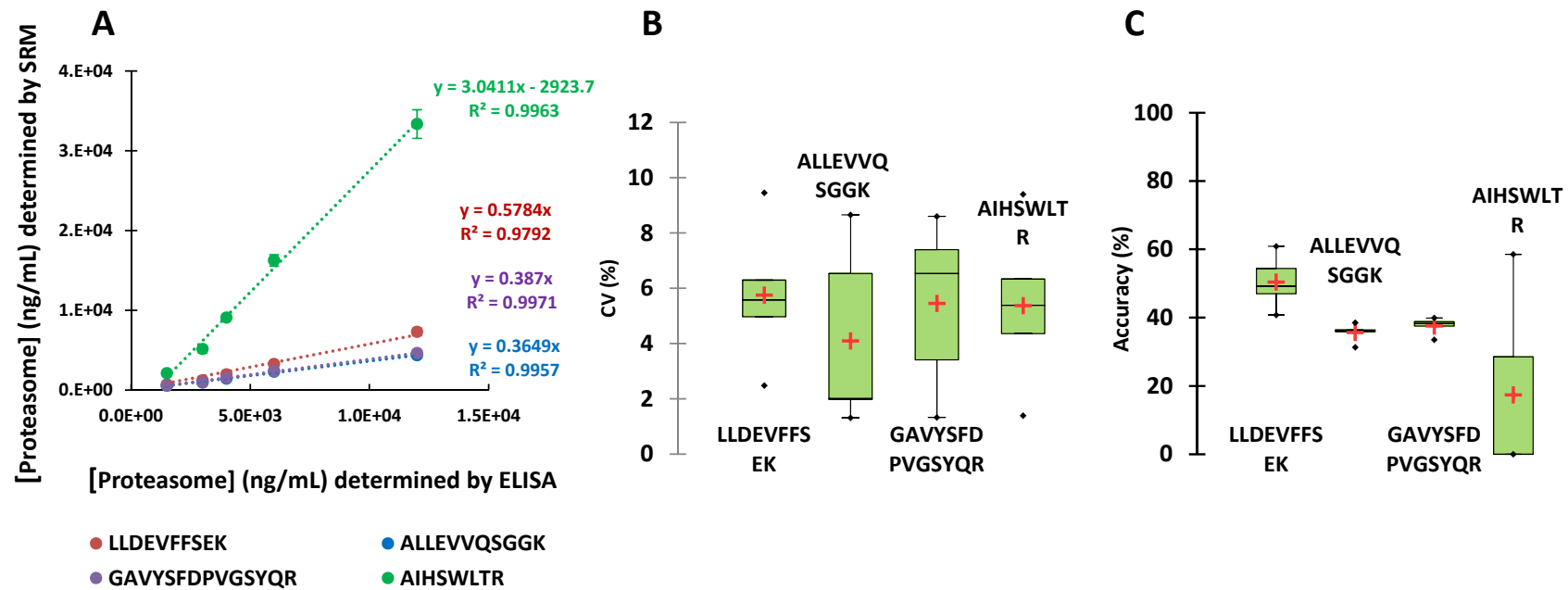


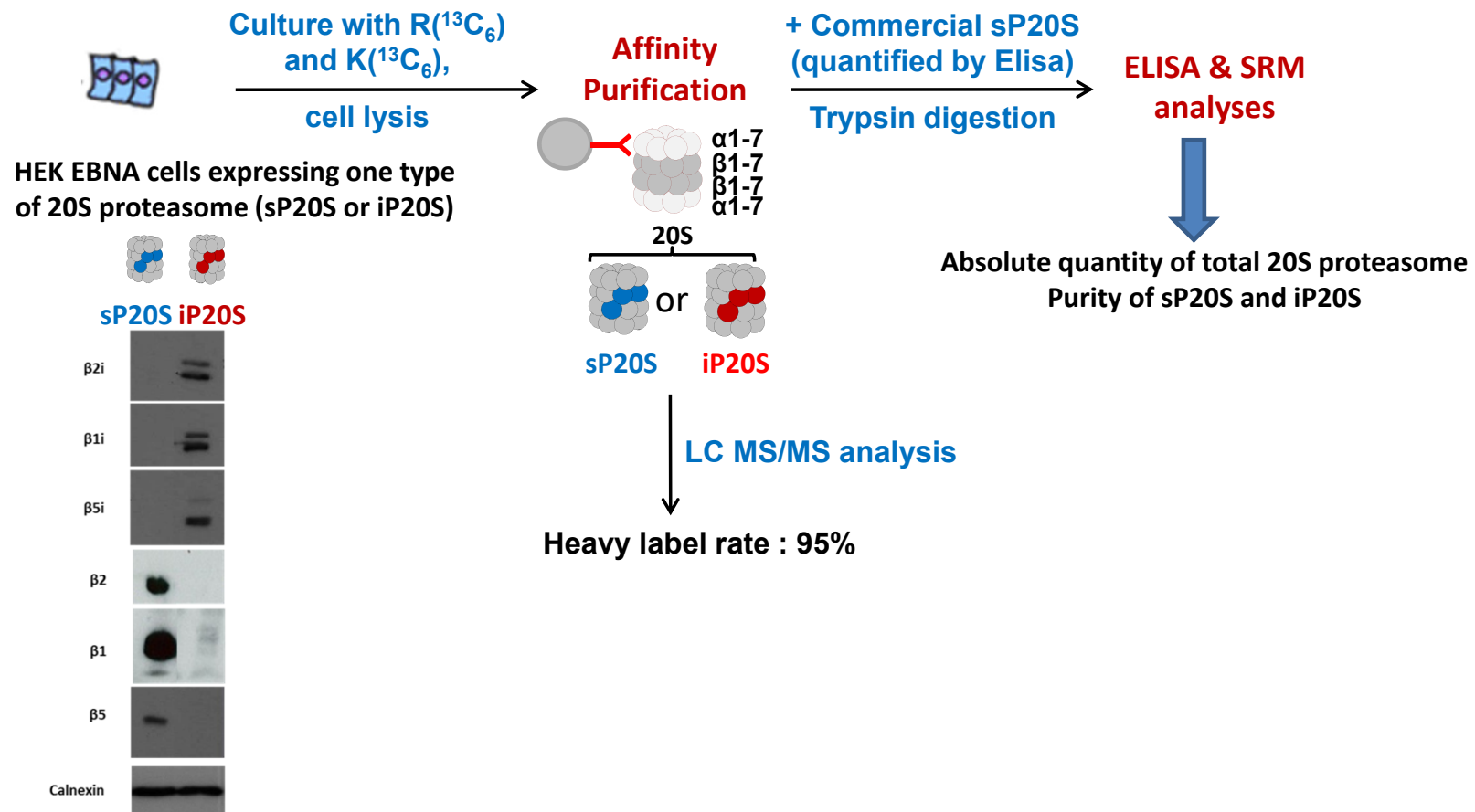
# Sup Figure 1



## Sup Figure 2

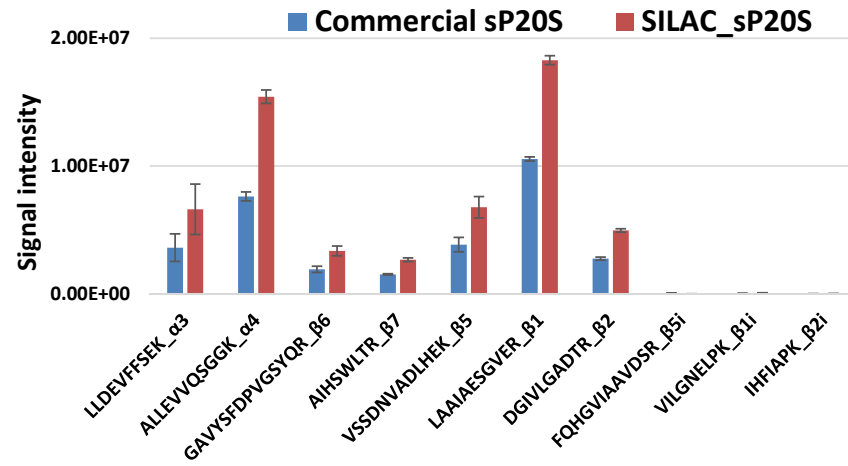


### Sup Figure 3

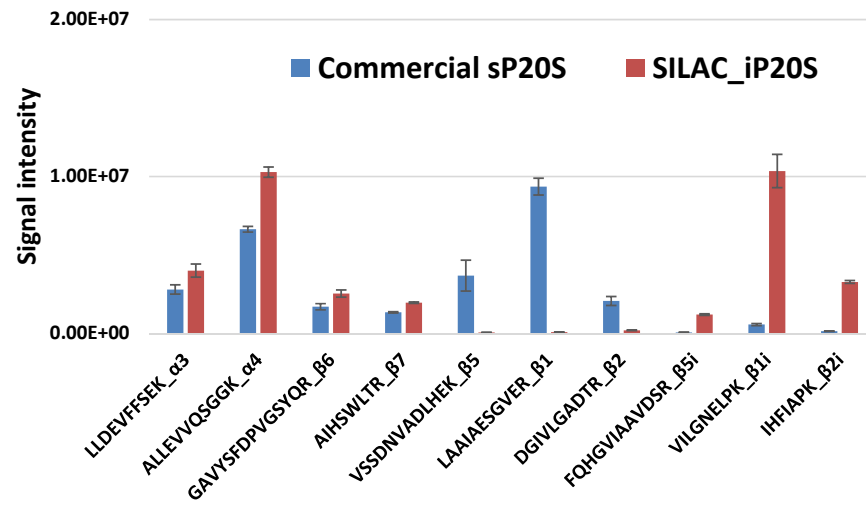


# Sup Figure 4

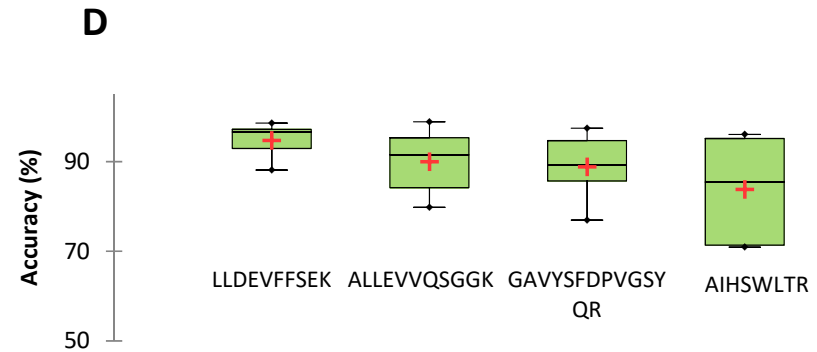
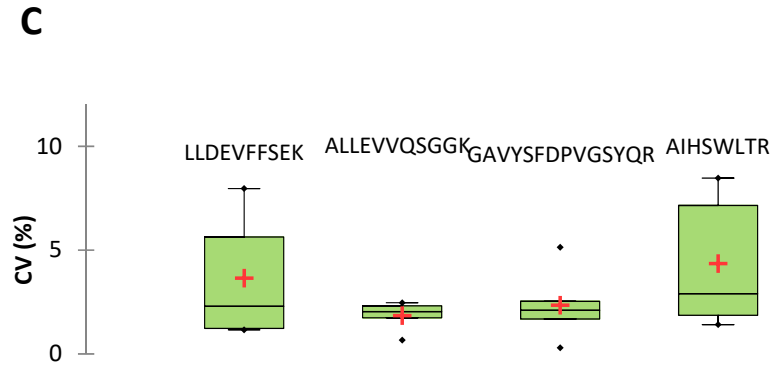
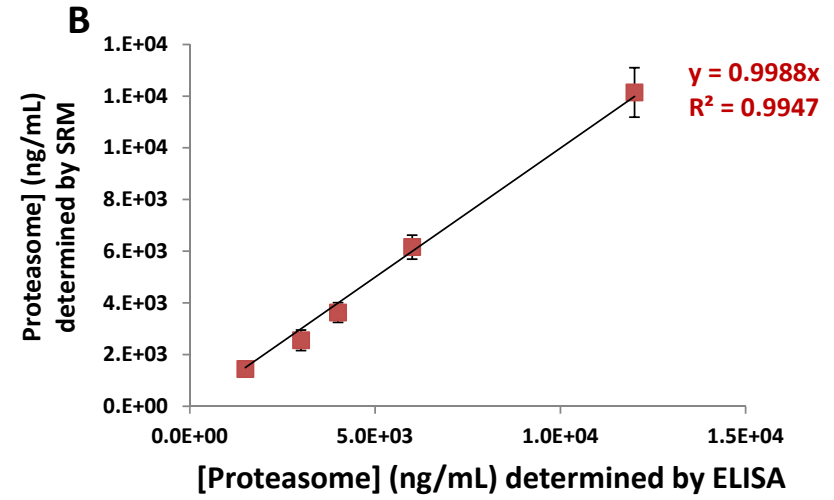
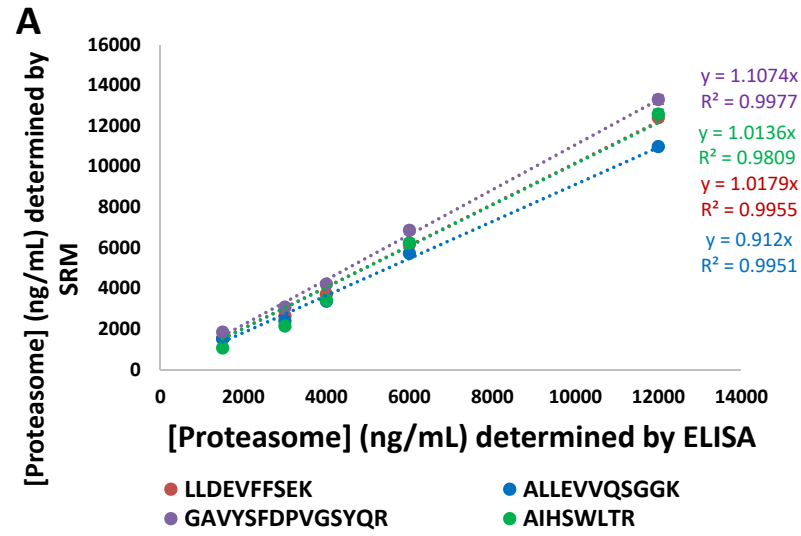
**A**



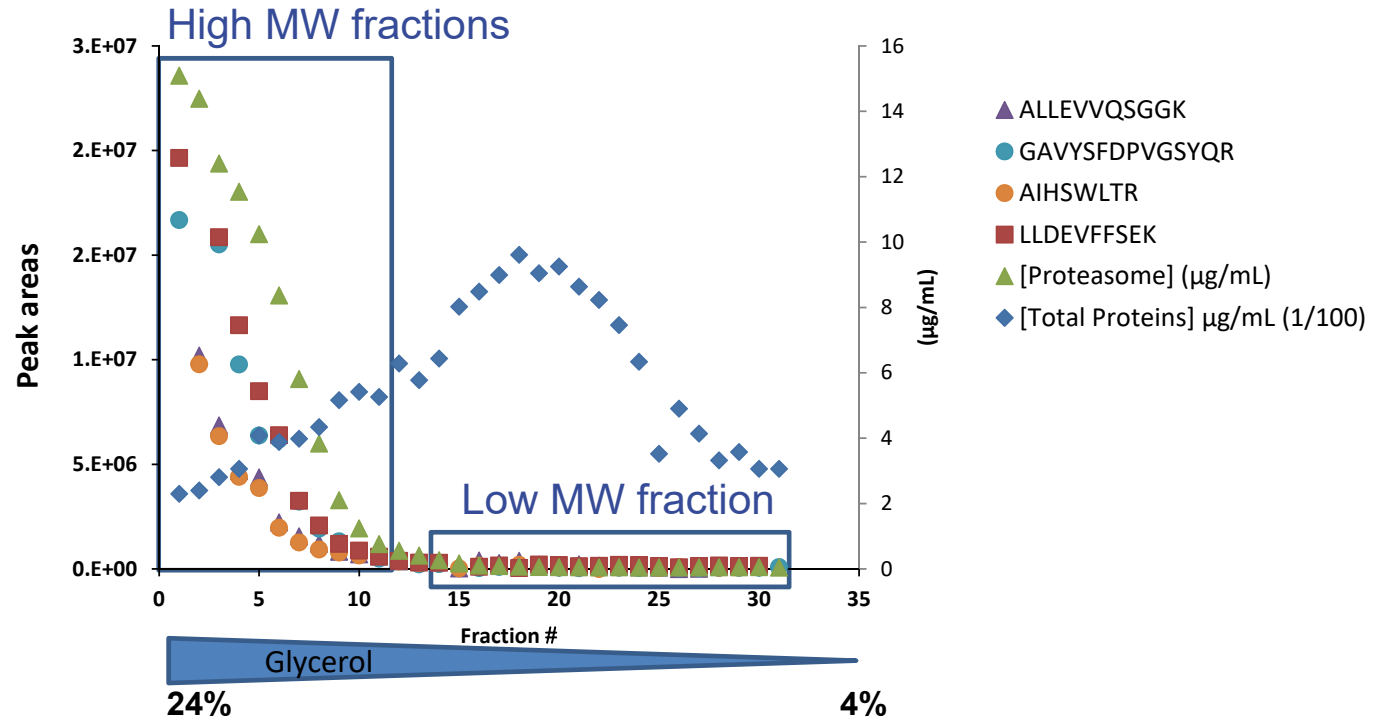
**B**



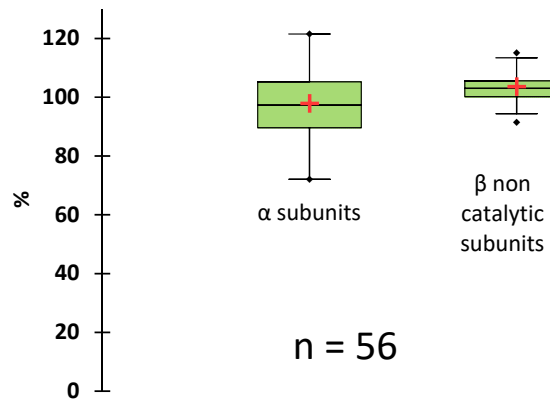
## Sup Figure 5



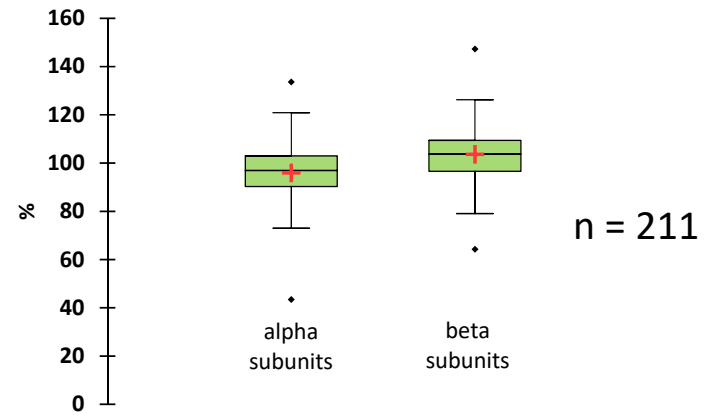
Sup Figure 6  
A



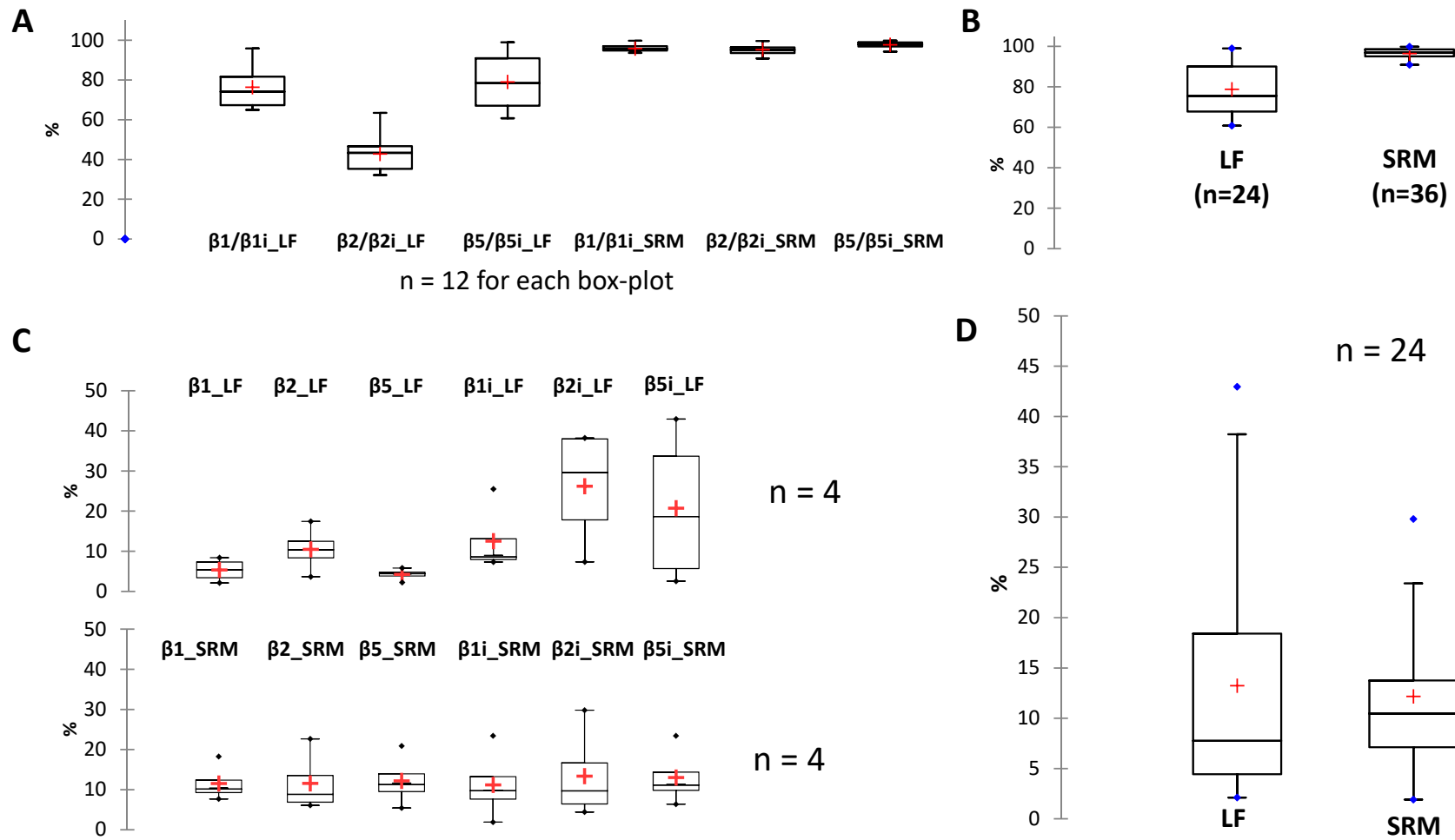
B



C



# Sup Figure 7



# Sup Figure 8

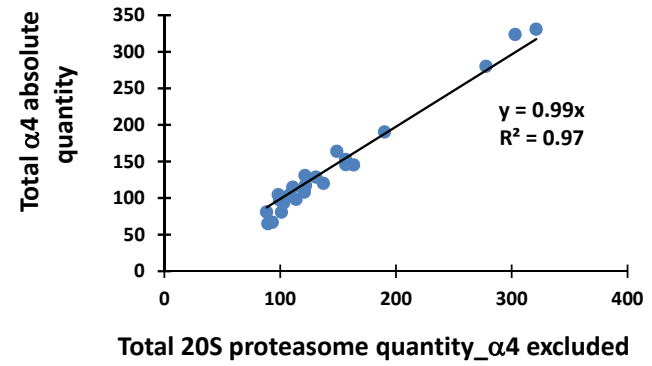
## A

**Ubiquitous  $\alpha 4$**  : >sp|O14818|PSA7\_HUMAN Proteasome subunit alpha type-7  
OS=Homo sapiens GN=PSMA7 PE=1 SV=1  
MSYDRAITVFS**PDGHLFQVEYAQ**EAVKKGSTAVGVRGRDIVVLGVEKKSVAKLQDERTVR  
KICALDDNVCMFAFGLTADARIVINRARVEQC**SHRLTV**EDP**VTVEY**ITR**Y**IASLKQRYTQSN  
GRR**PFGISALIVGFDFDGT**PRLYQTDP**SGTYHAWKANA**IGRGAKSVREFLEK**NYTDEA**IET  
**DDLTIK**LV**IKALLEVVQ**SGGKN**I**ELAVMRRDQSL**KILNPE**EIEKYVAEIEKEEENEK**KKQ**KAS  
**Testis-specific  $\alpha 4$  called  $\alpha 4s$**  : >sp|Q8TAA3|PSA7L\_HUMAN Proteasome subunit alpha type-7-like  
OS=Homo sapiens GN=PSMA8 PE=2 SV=3  
MASRYDRAITVFS**PDGHLFQVEYAQ**EAVKKGSTAVGIRGTNIVVLGVEKKSVAKLQDERT  
VRKICALDDHVCMFAFVLTIFIGLTADARVVINRARVEQC**SHKLT**VED**PVTVEY**ITR**F**FIATLK  
QKYTQSNRR**PFGISALIVGFDD**DGISRLYQTDP**SGTYHAWKANA**IGRSAKTVREFLEK**NY**  
TEDA**IASD**SEAIK**LAIKALLEVVQ**SGGKN**I**ELAIIRRNQPLKM**FSAKEV**ELYVTEIEK**EKEE**AEK  
KKS**K**SV

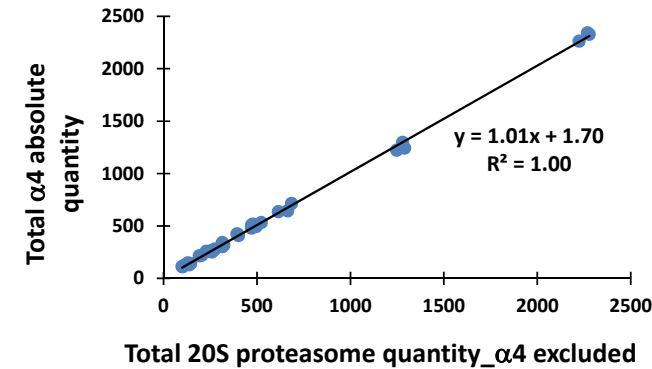
Peptides common to  $\alpha 4$  and  $\alpha 4s$  → total  $\alpha 4$  position subunit quantity  
Peptides specific to  $\alpha 4$  (PSMA7) → used to deduce  $\alpha 4s$  absolute quantity

PSA7_HUMAN	PSMA8_HUMAN	MSYDRAITVFS	PDGHLFQVEYAQ	EAVKKGSTAVGVRGRDIVVLGVEKKSVAKLQDERT	
014818	Q8TAA3	1	1	58	60
014818	Q8TAA3	59	61	112	120
014818	Q8TAA3	113	121	172	180
014818	Q8TAA3	173	181	232	240
014818	Q8TAA3	233	241	248	256

## C



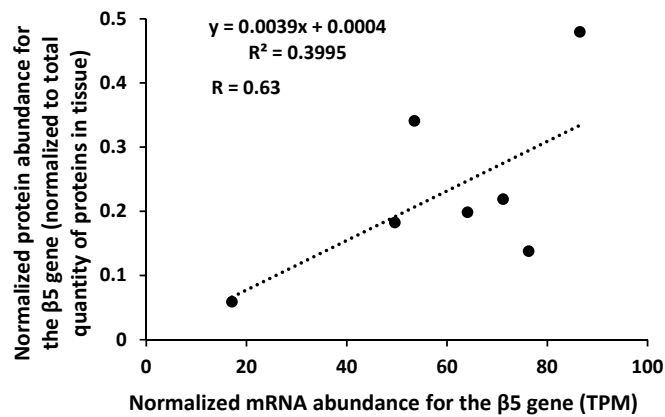
## D



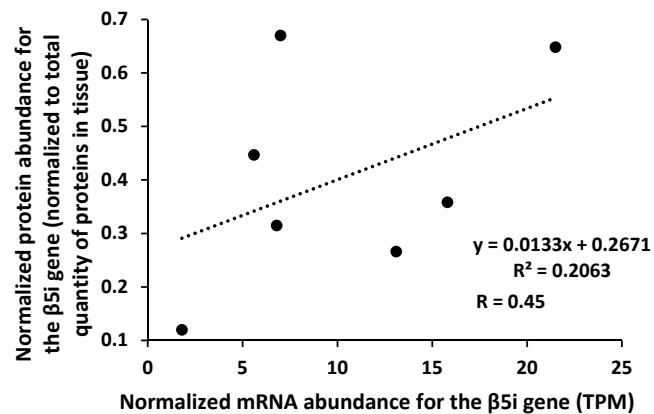


## Sup Figure 9

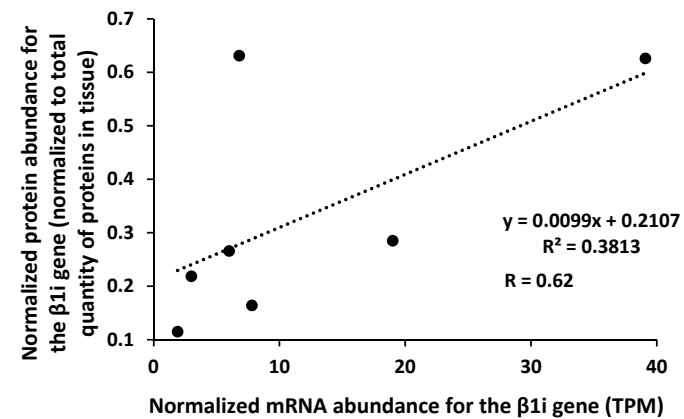
**A**



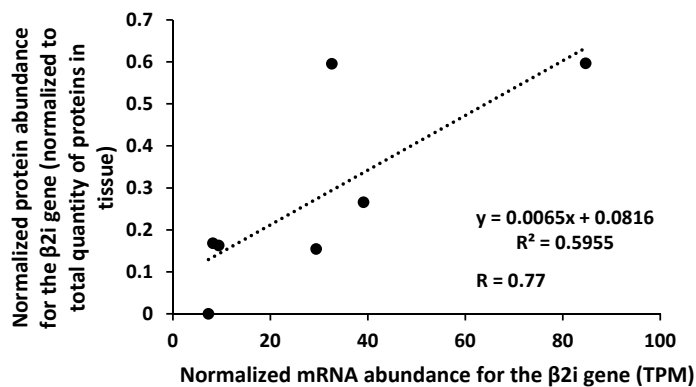
**B**



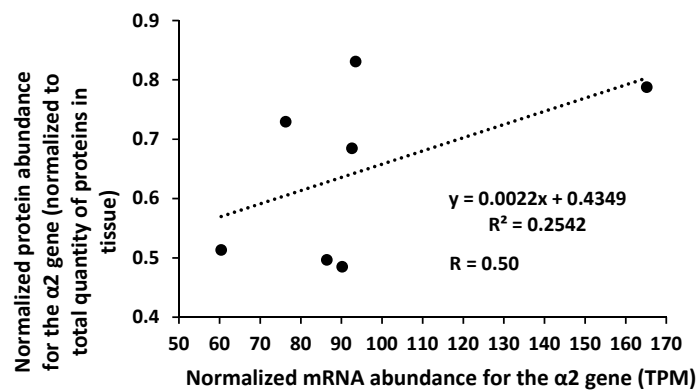
**C**



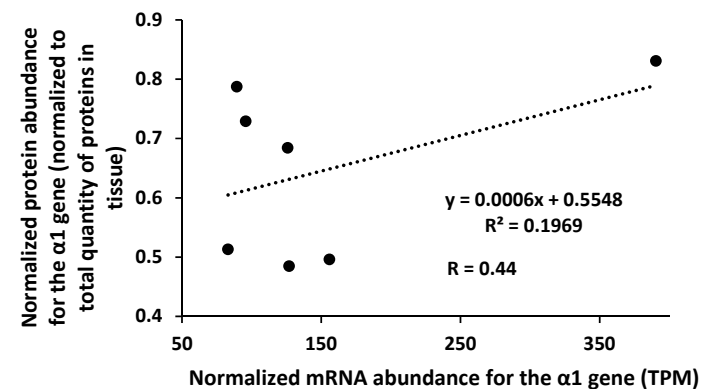
**D**



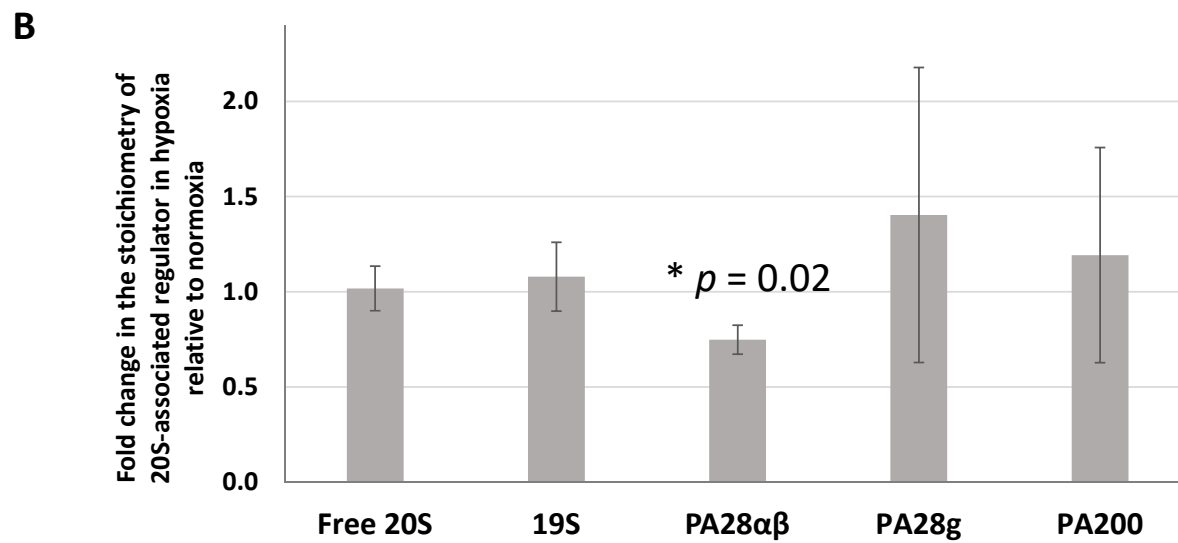
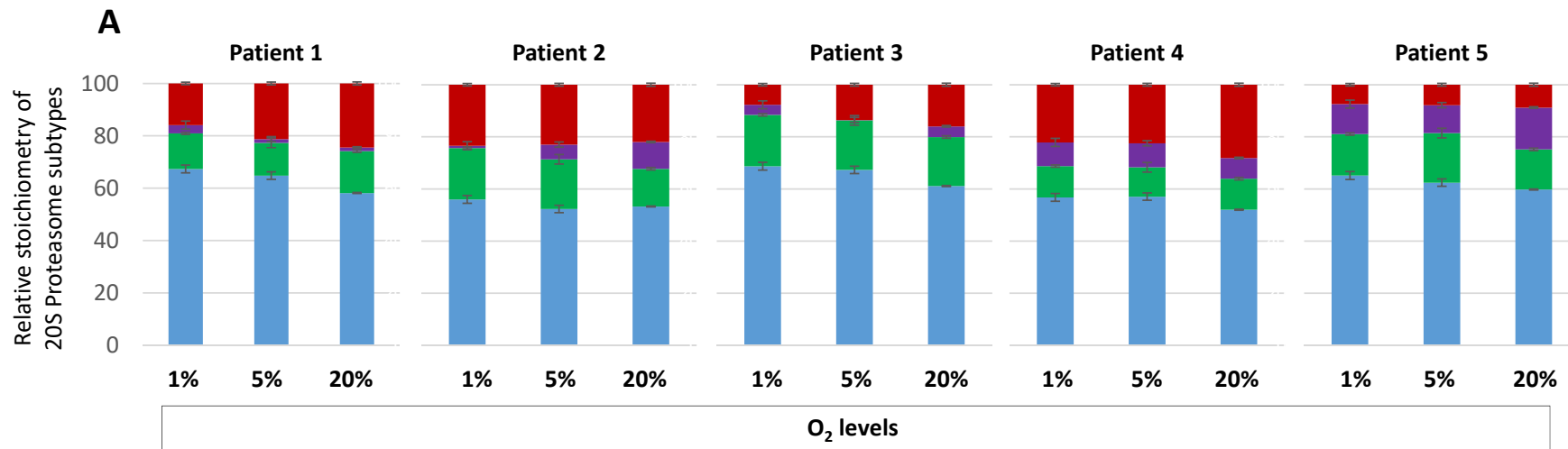
**E**



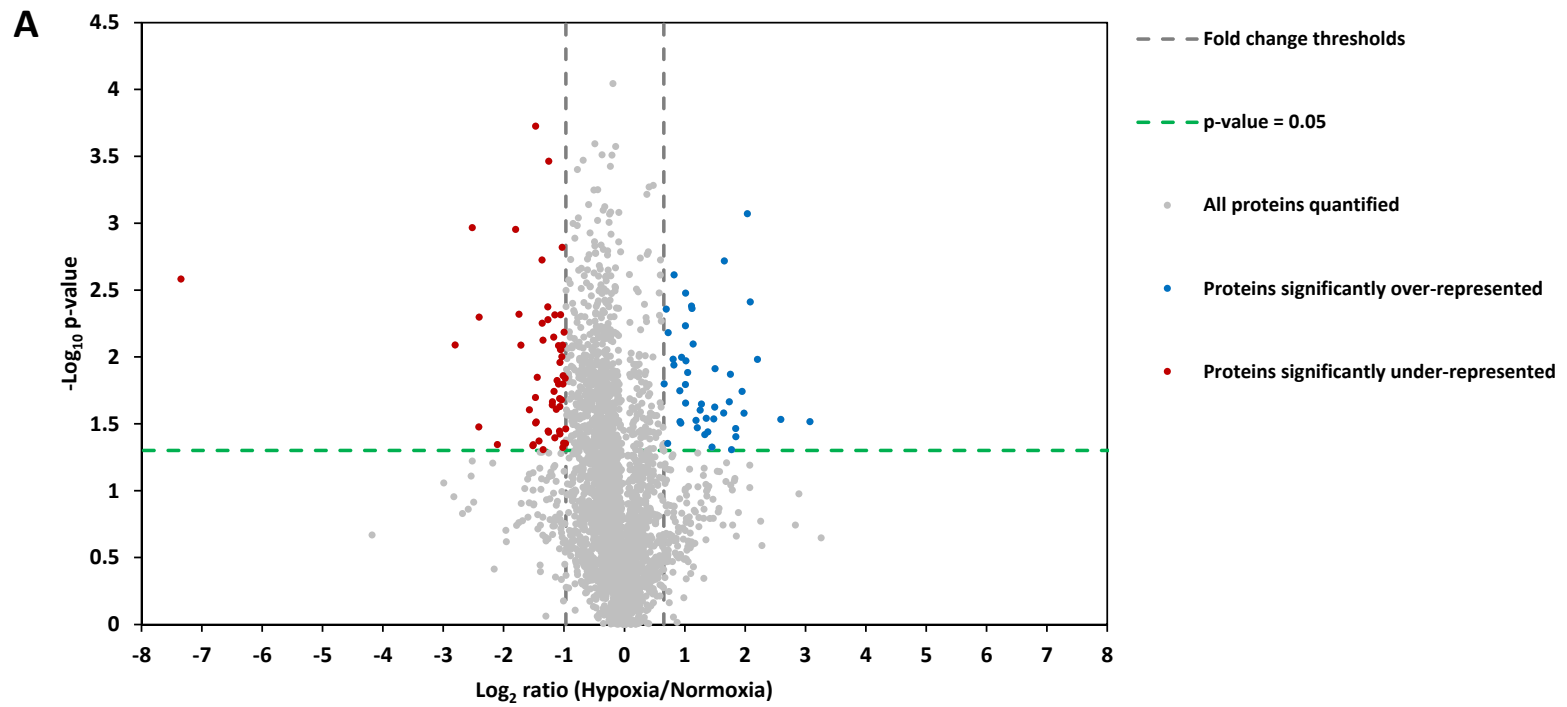
**F**



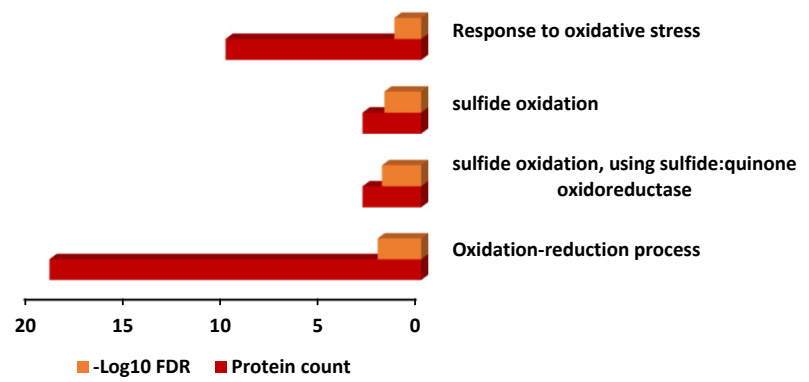
# Sup Figure 10



# Sup Figure 11



**B** **GO biological processes over-represented in Normoxia**



**C** **GO biological processes over-represented in Hypoxia**

