

Table S4: **Interfaces accounted for by enriched complexes.**

Complex name	Interface	Size	Hits	Predicted hits	Permuted subnetworks p -value	Random predictions p -value
19/22S regulator		22	3	14	0.002 *	< 0.001 *
SCF-Cdc4 complex	Cdc34p	5	1	3	0.015 *	0.017 *
Ada2p/Gcn5p/Ada3 transcription activator complex	Gcn5p	5	0	3	0.027 *	0.051
Tup1p/Ssn6p complex	Tup1p	2	0	2	0.05	0.049 *
Set3p complex		7	3	1	< 0.001 *	0.174
UDP-N-acetylglucosamine transferase complex		2	1	1	0.029 *	0.034 *
Nem1p/Spo7p complex		2	2	0	< 0.001 *	–
OCA complex		6	6	0	< 0.001 *	–
Ski Complex		3	3	0	0.009 *	–

Significantly enriched complexes that account for predicted interfaces. If the complex contains an interface and is not a predicted interface itself, the protein name of the predicted interface is listed in the “Interface” column. The final three rows list complexes that are entirely composed of hits.