

Table S4. Biological and technical repeats for Mps1 kinase. The QSpec method was used to analyze reproducibility of interactions recovered both within the same tag and between the HA and FLAG tags; values are expressed as odds. Values highlighted in green indicate tag influence on recovery of interaction partner.

Protein	Length	Odds of differential abundance			HA						FLAG					
		Between tags	HA	FLAG	HA	HA	HA	HA	HA	HA	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
ACT1	376	1.66	1.05	0.89	0	1	1	1	0	1	1	2	0	2	1	2
ADH1	348	0.92	1.27	0.92	0	0	2	1	1	1	0	2	1	0	0	1
ADH2	348	0.94	0.99	1.10	0	0	0	0	0	0	0	0	0	1	0	0
ADO1	341	1.15	1.13	1.05	0	0	0	0	0	1	0	0	0	0	0	0
AGE2	299	2.36	1.25	0.96	1	1	1	1	0	0	0	0	0	0	0	0
ALD6	500	0.94	1.02	1.11	0	0	0	0	0	0	0	0	0	1	0	0
AME1	324	16.63	0.94	0.60	0	0	1	2	1	1	2	4	2	3	4	2
ATP1	546	2.11	1.04	0.99	0	0	0	0	0	1	1	0	1	1	1	1
BBP1	386	1.10	1.05	1.01	0	0	0	0	0	1	0	0	0	0	0	0
BEM1	551	1.13	0.92	0.82	1	1	2	0	0	1	0	0	0	1	1	0
BFA1	575	1.62	0.90	0.78	0	0	2	0	1	1	1	2	0	2	0	2
BIK1	441	1.14	1.02	1.07	0	0	0	0	0	0	0	0	1	0	0	1
BOI2	1041	1.09	1.07	0.90	0	0	1	0	0	0	0	0	0	0	0	0
BUB2	306	1.02	0.98	0.99	0	0	0	0	0	0	0	1	0	0	0	0
CBF5	484	1.20	1.13	1.02	0	0	0	0	0	1	0	0	0	0	0	0
CDC14	551	1.49	1.05	1.33	0	2	1	0	1	2	0	0	1	1	0	0
CDC19	500	0.98	2.97	1.46	1	0	0	0	2	2	0	0	0	0	1	1
CDC31	161	0.71	0.58	0.50	8	7	6	6	6	7	6	7	6	7	8	6
CDC48	836	7.82	1.34	0.80	3	3	2	1	3	5	0	0	0	2	1	1
CHL4	459	0.95	1.02	1.13	0	0	0	0	0	0	0	0	0	0	0	1
CMD1	147	0.82	1.18	0.83	1	1	3	2	2	4	1	2	2	1	1	4
CNM67	582	0.78	0.93	1.31	0	1	0	0	0	1	0	0	2	0	0	0
CNN1	362	1.38	0.99	0.94	0	0	1	1	0	1	1	1	1	0	1	2
CPR1	163	1.27	0.95	0.93	0	1	0	0	0	1	0	0	0	0	0	0
CSE4	230	0.83	0.81	1.04	1	0	1	0	0	1	1	1	0	0	0	1
CTF3	733	0.90	1.07	1.15	1	1	0	1	1	2	1	0	0	3	1	0
DBP3	523	0.78	1.39	0.74	1	1	0	0	2	1	1	1	1	1	1	1
DED1	605	1.05	1.14	2.81	2	5	2	1	1	2	1	0	2	2	4	4
DFM1	341	1.01	0.98	0.99	0	0	0	0	0	0	1	0	0	0	0	0
DSN1	577	7.14	1.34	0.69	1	2	5	3	2	3	5	5	7	4	4	4
ECM10	645	2.25	10.77	1.11	0	0	5	0	0	0	0	0	0	0	0	0
ECM30	1274	0.93	1.02	1.11	0	0	0	0	0	0	0	0	0	0	0	1
ELG1	792	0.94	1.05	1.04	0	0	0	0	0	0	0	1	0	0	0	0
ENO1	438	2.20	1.07	1.55	0	0	0	0	1	0	2	2	0	0	0	0
ENO2	438	2.01	0.81	2.60	0	0	0	1	0	1	0	0	3	2	2	3
FAS1	2052	0.99	1.04	1.05	0	0	0	0	0	0	0	1	0	0	0	0
FAS2	1887	0.78	0.96	2.28	0	0	0	1	0	1	0	0	2	1	0	0
FBA1	360	0.90	1.51	0.89	1	0	0	0	1	2	1	0	1	1	1	2
GAL10	699	1.22	1.10	1.04	0	1	0	0	0	0	0	0	0	0	0	0
GCD1	579	1.18	1.13	1.02	0	0	0	0	0	1	0	0	0	0	0	0
GCD2	652	1.20	1.07	1.04	0	1	0	0	0	0	0	0	0	0	0	0
GCD6	713	27.73	0.91	0.98	2	2	1	2	2	3	0	0	0	0	0	0
GCN3	306	1.06	1.15	1.04	0	0	0	0	0	1	0	0	0	0	0	0
GPM1	248	1.17	2.41	4.29	1	1	1	0	3	2	0	0	2	2	0	0
HOM6	360	0.96	1.01	1.11	0	0	0	0	0	0	0	0	0	0	1	0
HRR25	495	2.36	0.93	0.80	2	2	4	2	2	6	1	0	1	1	1	1
HSC82	705	0.95	0.91	1.04	0	2	0	1	1	0	0	1	0	1	0	0
HSP12	110	1.07	1.04	1.21	0	0	0	0	0	0	0	0	0	1	0	0
HSP26	214	0.96	0.80	0.92	2	2	1	1	0	2	1	1	1	1	0	1
HXK1	485	1.14	1.18	1.06	0	0	0	0	0	1	0	0	0	0	0	0
HYP2	158	1.15	1.49	1.01	0	0	0	0	1	1	0	0	0	0	0	0
ILV2	687	0.89	0.94	1.06	0	0	0	0	0	0	0	0	0	0	1	0
IMD2	523	1.17	1.13	1.04	0	0	0	0	1	0	0	0	0	0	0	0
IMD3	523	2.52	0.79	0.98	1	1	1	0	0	1	0	0	0	0	0	0
IML3	245	2.11	0.96	1.33	0	0	0	0	0	0	0	0	0	2	0	2
IRC20	1557	0.92	1.00	1.06	0	0	0	0	0	0	0	0	1	0	0	0
KAP95	861	0.83	0.88	0.92	0	1	0	1	1	1	0	1	1	1	1	0
KAR1	434	1.22	0.84	1.14	0	0	1	0	0	1	0	1	1	0	1	2
KAR2	683	0.87	0.68	0.67	3	3	4	4	3	4	2	2	2	2	1	3
KSS1	368	1.02	0.98	0.99	0	0	0	0	0	0	0	1	0	0	0	0
LEU2	365	0.98	1.04	1.09	0	0	0	0	0	0	0	0	0	0	0	1
LSP1	341	1987.03	1.72	1.17	5	6	4	2	0	3	0	0	0	0	0	0
LTV1	464	0.95	1.04	0.98	0	0	0	0	0	0	1	0	0	0	0	0
LYS21	441	1.68	0.98	1.22	0	0	0	0	0	0	0	0	1	0	1	1
MAD1	749	0.96	1.06	1.02	0	0	0	0	0	0	0	1	0	0	0	0
MCM21	368	1.30	0.99	1.17	0	0	0	0	0	1	0	3	0	0	0	0
MCM22	239	1.02	1.04	1.18	0	0	0	0	0	0	0	0	0	0	1	0
MDJ1	511	1.46	1.09	0.95	0	1	1	0	0	0	0	0	0	0	0	0
MET6	768	0.91	1.04	1.05	1	0	1	0	0	0	0	0	0	1	0	0
MET7	548	1.18	1.11	1.06	0	0	0	1	0	0	0	0	0	0	0	0
MIF2	549	2.81	1.05	1.02	0	0	0	0	0	1	1	1	1	0	1	2
MLC1	149	1.56	0.72	0.94	1	1	1	1	1	1	0	1	0	0	0	0
MPS1	765	0.78	0.46	0.57	26	27	25	26	27	26	23	25	24	22	21	24
MPS2	388	0.81	1.30	1.25	0	0	1	1	0	0	1	0	0	0	0	2
MPS3	683	0.80	2.13	0.85	0	0	3	1	0	1	1	0	1	0	1	1
MTF2	441	0.93	1.00	1.10	0	1	1	0	0	0	0	0	0	0	1	0
MTW1	289	3.85	0.85	0.62	1	1	1	2	0	2	2	4	3	2	3	2
MYO2	1575	1.17	1.07	0.98	0	0	1	0	0	0	0	0	0	0	0	0
NAP1	418	0.89	1.10	1.07	0	0	0	0	1	0	0	0	0	0	1	0
NBP1	319	1.14	1.09	1.01	0	0	0	0	1	0	0	0	0	0	0	0
NBP2	237	0.95	0.74	0.75	1	1	1	1	1	1	1	2	1	1	1	2
NDC1	655	0.89	0.99	0.80	0	1	0	0	0	1	0	1	1	0	0	1
NIS1	407	1.15	1.06	0.96	0	0	0	0	1	0	0	0	0	0	0	0
NKP1	239	4.11	1.05	0.90	0	0	0	0	0	1	2	1	1	0	1	1
NKP2	154	0.91	1.04	1.15	0	1	0	0	1	0	1	1	0	0	0	0
NNF1	202	0.85	0.95	1.20	3	3	2	1	2	4	1	1	2	3	4	3
NOP1	328	2.88	0.96	0.98	1	2	0	1	1	2	0	0	0	1	0	0
NOP58	511	6.06	0.83	0.95	4	5	3	3	6	4	0	1	0	4	1	4
NPL3	414	2.11	1.00	1.00	0	1	0	2	0	1	0	0	0	0	0	0
NSL1	217	35.68	0.95	1.41	1	1	0	1	2	1	5	5	2	2	2	3
NSR1	414	2654.52	0.64	1.14	3	7	5	4	5	2	0	0	0	0	0	0
NUD1	851	0.99	0.84	0.75	1	1	2	1	1	1	2	1	1	2	1	2
NUF2	452	0.81	0.67	1.49	6	8	9	8	8	8	6	9	3	5	6	5

OKP1	406	3.10	0.99	0.79	0	0	2	0	0	2	1	3	2	0	2	1
PDC1	564	1.02	3.77	0.95	1	2	1	0	4	3	1	0	0	2	2	1
PGK1	417	0.77	1.58	1.60	0	2	0	0	1	2	0	1	2	2	0	1
PIL1	340	453.91	0.83	1.10	4	5	4	0	2	2	0	0	0	0	0	0
POR1	284	1.01	0.96	0.95	0	0	0	0	0	0	1	0	0	0	0	0
PRB1	636	0.84	0.85	0.93	0	1	1	0	1	1	0	1	1	1	1	2
PTC1	282	1.30	0.95	0.94	2	1	1	0	0	1	0	0	1	0	0	1
PTP2	750	1.00	1.02	1.15	0	0	0	0	0	0	0	0	0	0	1	0
RNQ1	405	1.70	0.91	0.94	0	1	0	1	0	1	0	0	0	0	0	0
ROT2	955	1.18	1.11	0.95	0	0	0	0	1	0	0	0	0	0	0	0
RPA49	416	0.90	1.01	1.10	0	0	0	0	0	0	0	0	0	0	0	1
RPL11B	175	0.82	0.99	1.44	0	0	1	0	0	0	0	0	0	0	2	0
RPL13A	199	0.96	1.00	0.92	0	0	0	0	1	0	0	0	0	0	0	0
RPL16B	198	0.84	1.02	1.01	1	0	0	0	0	1	0	0	1	1	1	0
RPL17B	184	1.09	1.01	1.05	0	0	0	0	0	0	0	1	0	0	0	0
RPL19B	190	1.38	1.09	1.00	0	0	1	0	0	1	0	0	0	0	0	0
RPL26A	127	1.25	1.02	0.84	0	0	1	1	0	1	1	1	1	0	1	1
RPL2B	254	1.05	0.96	0.94	1	0	0	0	0	0	0	0	0	0	0	0
RPL3	388	0.88	0.90	0.96	1	1	0	1	1	1	1	2	1	0	1	1
RPL35A	121	1.34	1.00	1.06	0	1	1	0	0	0	0	0	0	0	0	0
RPL40A	128	2.44	1.22	1.05	1	1	0	0	1	1	0	0	0	0	0	0
RPL4A	362	0.98	1.31	1.04	1	0	0	0	1	1	0	0	0	0	1	0
RPL7A	245	1.53	0.99	1.02	0	0	0	0	0	1	1	0	0	1	0	2
RPL9A	192	1.02	1.01	1.14	0	0	0	0	0	0	0	0	0	0	0	1
RPM2	1202	14.27	1.22	1.05	4	2	1	0	1	2	0	0	0	0	1	0
RPN10	269	1.17	0.94	1.58	0	0	0	0	0	0	0	0	1	1	0	0
RPP0	312	0.96	1.00	0.99	0	0	0	0	0	1	1	0	0	0	0	1
RPP1B	106	1.04	0.96	1.14	0	0	0	0	0	0	0	0	0	1	0	0
RPP2A	106	1.09	1.05	1.25	0	0	0	0	0	0	0	0	0	1	0	0
RPP2B	110	1.28	1.06	0.99	0	0	0	1	1	0	0	0	0	0	0	0
RPS14B	138	0.80	0.87	0.75	2	2	2	1	1	1	2	2	1	2	2	2
RPS15	142	0.82	0.99	0.99	0	0	1	0	0	1	0	1	0	0	0	1
RPS16B	144	3.31	0.93	2.25	0	0	0	0	0	0	0	0	1	1	2	2
RPS17B	137	0.88	1.09	1.04	0	0	0	0	0	1	0	1	0	0	0	0
RPS18A	146	2.04	1.07	1.66	1	0	1	0	0	0	2	1	0	0	2	1
RPS19B	144	1.30	1.02	0.89	0	0	0	0	0	1	0	1	1	0	1	0
RPS1A	255	0.89	0.93	1.05	0	0	0	0	0	0	0	0	0	0	0	1
RPS22A	130	0.98	1.05	1.14	0	0	0	0	0	0	0	0	1	0	0	0
RPS5	226	0.90	1.09	0.99	1	0	0	0	0	1	0	0	0	1	1	0
RPS6B	237	1.30	1.04	0.98	0	0	0	0	0	0	0	1	0	0	0	1
RPS9B	195	0.93	0.95	1.04	0	0	0	0	0	1	1	0	1	0	0	0
SAM2	385	1.05	1.04	1.02	0	0	0	0	0	0	0	1	0	0	0	0
SCC2	1494	1.24	1.05	1.02	0	1	0	0	0	0	0	0	0	0	0	0
SFI1	947	1.33	0.63	0.77	6	9	11	5	6	8	8	11	9	10	12	14
SIK1	505	26.49	1.01	1.64	5	10	4	4	6	8	1	2	2	4	1	1
SLA1	1244	0.93	1.11	0.99	1	1	0	0	0	0	1	0	0	0	0	1
SLF1	447	0.96	1.07	1.18	0	0	0	0	0	0	0	0	0	1	0	0
SNF1	633	1.18	1.09	1.01	1	0	0	0	0	0	0	0	0	0	0	0
SNT1	1226	1.21	1.15	1.02	0	0	0	1	0	0	0	0	0	0	0	0
SOV1	898	3.28	0.96	0.98	0	0	0	0	0	0	1	0	1	1	1	1
SPC105	918	19.52	0.96	0.72	1	0	1	1	0	4	3	5	2	3	3	5
SPC110	945	0.74	0.58	0.57	12	9	13	11	13	14	8	10	10	11	9	9
SPC24	213	0.78	0.89	0.91	6	7	6	6	5	4	4	4	5	8	5	5
SPC25	221	1.94	0.70	0.96	3	2	3	2	3	2	0	2	0	1	1	1
SPC29	254	0.96	0.73	0.75	2	3	3	2	1	3	1	2	1	2	1	3
SPC42	363	0.71	0.74	0.61	4	6	7	3	8	6	4	4	5	4	5	6
SRP1	542	0.88	1.00	1.21	0	0	2	0	0	1	0	0	1	1	2	1
SRP40	406	13.74	1.56	1.11	1	1	3	1	2	4	0	0	0	0	0	0
SSA1	642	156.97	8.40	9.28	5	7	6	20	5	23	14	18	12	18	13	4
SSA2	639	26404.26	1.14	15.12	20	19	20	7	22	8	1	5	2	5	4	15
SSA3	649	0.95	1.02	1.07	0	0	0	0	0	0	0	0	1	0	0	0
SSA4	642	40144.90	0.57	1.18	6	9	6	4	7	7	0	0	0	1	0	0
SSB2	613	1.21	0.42	0.49	17	20	19	14	18	18	11	13	13	12	11	12
SSC1	654	1.34	1.97	0.69	7	6	0	6	8	6	3	3	5	4	3	5
SSD1	1251	1.06	1.11	1.34	0	0	1	0	0	0	0	0	1	1	0	1
SSE1	694	1.64	2.66	0.88	1	0	2	0	2	4	0	0	0	1	1	0
SSE2	694	1.49	1.04	1.01	0	1	0	1	0	0	0	0	0	0	0	0
SSF1	454	0.93	1.02	1.51	1	1	1	0	0	0	0	0	1	1	0	0
STM1	274	0.99	1.00	1.38	0	1	1	1	1	1	0	0	1	1	0	0
SWE1	819	0.96	1.05	0.90	0	0	1	1	0	2	0	0	1	0	1	0
SWI5	710	0.88	0.95	1.02	0	0	0	0	0	0	0	0	0	0	0	1
SYN8	255	0.80	1.22	0.96	1	0	0	0	1	1	0	0	0	1	1	0
TAL1	336	1.20	1.11	1.04	0	0	0	0	1	0	0	0	0	0	0	0
TDH3	333	0.76	1.41	1.60	1	1	2	1	3	3	0	1	2	4	3	2
TEF2	459	0.91	1.17	0.75	3	3	4	2	5	6	2	2	2	3	2	3
TID3	691	0.72	0.48	0.44	20	18	17	18	17	18	11	18	16	18	15	19
TMA19	167	1.11	1.14	0.98	0	0	0	0	0	1	0	0	0	0	0	0
TPM1	199	1.09	1.13	1.25	0	0	0	0	0	0	0	0	0	1	0	0
TRE1	783	0.96	1.06	1.01	0	0	0	0	0	0	1	0	0	0	0	0
TRX1	103	1.04	0.98	1.00	0	0	0	0	0	0	0	1	0	0	0	0
TRX2	104	0.83	0.91	1.09	0	1	1	0	0	1	0	0	0	1	1	1
TSA1	197	1.17	0.95	1.51	0	0	0	0	0	0	0	0	1	1	0	0
TUB4	474	1.64	1.30	0.99	0	0	1	1	0	1	0	0	0	0	0	0
TUS1	1308	1.20	1.01	0.98	1	0	0	0	0	0	0	0	0	0	0	0
UBA4	441	1.30	1.09	1.04	0	0	0	0	0	0	0	0	0	1	0	1
UBP11	717	1.15	1.05	0.94	0	0	1	0	0	0	0	0	0	0	0	0
URA2	2215	1.13	1.04	0.92	0	0	0	1	0	0	0	0	0	0	0	0
URA3	267	1.15	1.07	1.00	0	0	0	0	1	0	0	0	0	0	0	0
USO1	1790	1.20	1.09	1.04	0	0	0	0	1	0	0	0	0	0	0	0
VMA2	517	2.01	0.95	1.02	0	0	0	0	0	0	1	1	0	0	0	1
VPS35	945	1.36	0.99	0.94	0	0	0	1	0	1	0	0	0	0	0	0
YDR532C	386	0.83	1.05	0.93	0	1	0	1	0	0	0	0	1	0	0	1
YGL194C-A	81	1.76	1.00	0.93	0	1	1	0	1	1	0	0	0	0	0	0
YIL151C	1118	3.35	0.81	1.02	2	0	1	0	1	1	0	0	0	0	0	0
YJR012C	207	0.98	1.01	1.09	0	0	0	0	0	0	0	0	0	0	1	0
YKR096W	1195	2.13	0.85	1.06	2	1	1	0	1	1	1	0	0	0	0	0
YME1	748	1.15	1.07	0.96	0	0	1	0	0	0	0	0	0	0	0	0
YML6	287	0.94	0.95	1.09	0	0	0	0	0	0	0	0	0	1	0	0
YRA2	203	0.91	1.06	1.06	0	0	1	0	0	0	0	0	1	0	0	0

* protein interactions highlighted in green are dependent on the choice of tag