

Table S1. List of CUL3 interacting partners in *Xenopus* egg extract, identified by mass spectrometry. 174 proteins were identified of which 127 listed here were identified only in CUL3 IP samples and not in control pre-immune IP samples. Known interacting partners of CUL3 are highlighted in yellow, and novel CUL3 interacting BTB proteins are highlighted in blue.

Protein/Gene Name	Uniprot Entry No.
XCaspase-6	Q9IB66
Keratin type 1	CAA28497
CUL3	Q6DE95
Gfpt: glutamine-fructose-6-phosphate transaminase 1	Q6NTL6
MGC8174: ATP-binding cassette, sub-family F (GCN20), member 1	Q66J73
Paics-prov protein	Q8AVT1
CaMKII: Calcium/calmodulin-dependent protein kinase II gamma M subunit	Q9DFZ8
MGC82844	Q6GNF2
Keratin	KRXL
Psme2: proteasome (prosome, macropain) activator subunit 2 (PA28 beta)	Q6GLW2
rpl12: ribosomal protein L12	Q8AVW0
tuba1a: tubulin	Q6NRV3
p4hb:prolyl 4-hydroxylase	Q6DD55
Psme1:proteasome (prosome, macropain) activator subunit 1 (PA28 alpha)	Q640X8
smarcc1: SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 1	Q7ZY22
MGC80754	Q6GP09
Rps18:ribosomal protein S18	Q6NTT2
Rpsa:40S ribosomal protein SA	Q3ZM03
MGC68562	Q6P699
Rplp1: ribosomal protein, large, P1	Q6IMN2
Putative uncharacterized protein	Q6DJJ6
Eif3a:eukaryotic translation initiation factor 3, subunit A	Q6PF66
ribosomal protein S14	R4HY14
Camk2d: Calcium/calmodulin-dependent protein kinase type II delta chain	Q9DG02
Rps17:ribosomal protein S17	Q6GNF4
Snrpd2: small nuclear ribonucleoprotein D2 polypeptide 16.5kDa	Q5SHZQ7
MGC80314	Q6GQ64
ccar1:Cell division cycle and apoptosis regulator protein 1	AAH82374
Rpl31:ribosomal protein L31	Q6DEN9
Ubb:ubiquitin B	Q7ZXG5
ino1-a:Inositol-3-phosphate synthase 1-A	Q7ZXY0
ribosomal protein S3a	R3XL3A
LOC443632	Q4QR56
rps19:ribosomal protein S19	Q6PHL6
Rpl7:ribosomal protein L7	Q3B8I3
Tuba1a: tubulin	Q7ZYU9
Lsf: transcription factor lsf	Q7T0B5
ribosomal protein S13	RS13
MGC83164	Q6IRP2
Hist1h2aa:histone cluster 1, H2aa	Q6DKE3
Katna1: Katanin p60 ATPase-containing subunit	AAD53310
rpl19: 60S ribosomal protein L19	AAH41546
isynal-b:Inositol-3-phosphate synthase 1-B	Q6DDT1
pcm-1: Pericentriolar material 1 protein	Q9PVV4
Rps13: ribosomal protein S3	Q7SZT6
polr2c:polymerase (RNA) II (DNA directed) polypeptide C, 33kDa	Q6IRR3
MGC82844	Q6GQC6
parn-A: Poly(A)-specific ribonuclease PARN	AAK64218
eif31:Eukaryotic translation initiation factor 3 subunit L	Q8AVJ0
Rpl24:ribosomal protein L24	Q66L23
Sip1	Q6DDI7
rpl23a	Q66KX3
polr2j: polymerase (RNA) II (DNA directed) polypeptide J, 13.3kDa	Q5M778
KLHL18:kelch-like 18	Q6DDT3
tpp2: tripeptidyl peptidase II	Q6GQZ3
rpl27a: ribosomal protein L27a	Q7SZB2
CSN8: COP9 signalosome complex subunit 8	CSN8
rps26: ribosomal protein S26	Q6AZL7
MGC131019	Q3KQ39
rpl13a: ribosomal protein L13a	Q7ZY48
rps2: ribosomal protein S2	Q7TOR9
Rps12:40S ribosomal protein S12	Q6PH94
MGC82136	Q6DJJ7
smarcc4:SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4	Q4VQ79
eif3k: Eukaryotic translation initiation factor 3 subunit K	Q6GNI4
rpl27:60S ribosomal protein L27	Q6PHL5
Fau: Finkel-Biskis-Reilly murine sarcoma virus (FBR-MuSV) ubiquitously expressed	Q4KLF0
rpl6:60S ribosomal protein L6	Q6DJF7

Table 1S. Continued.

Protein/Gene Name	Uniprot Entry No.
CSN3: COP9 signalosome complex subunit 3	AAH44034
rpl38:ribosomal protein L38	Q66KV2
rps6: 40S ribosomal protein S6	Q7ZYU0
Arfgap3:ADP-ribosylation factor GTPase activating protein 3	Q7ZYR5
gpn1: GPN-loop GTPase 1	Q3KQ86
Eif3sg-a: Eukaryotic translation initiation factor 3 subunit G-A	Q6DJ18
Rpl34	Q4FZQ3
eif3e-a:Eukaryotic translation initiation factor 3 subunit E-A	Q918W7
Rae1/Gle2:	Q7ZZY7
rps28p9:ribosomal protein S28 pseudogene 9	Q66KP7
lztfl1:leucine zipper transcription factor-like 1	Q7ZXF9
g3bp2: GTPase activating protein	Q6DFK7
CSN6:COP9 signalosome complex subunit 6	AAH68673
SNRPD3: small nuclear ribonucleoprotein D3 polypeptide 18kDa	Q5ZL58
Cops2:COP9 constitutive photomorphogenic homolog subunit 2	Q2VPH6
Rpl32: ribosomal protein L32	Q66KW5
CSN5:COP9 signalosome complex subunit 5	AAH74434
MGC64430	Q7SZ87
rpl18a: ribosomal protein L18a	Q7SZB7
CDC2A:Cyclin-dependent kinase 1-A	A44349
Strap: serine/threonine kinase receptor associated protein	Q642N8
Rpl28: ribosomal protein L28	Q66KV6
Rps4:40S ribosomal protein S4	Q3B893
LOC443624	Q6GPN5
Rpl29:ribosomal protein L29	Q66KW1
rps15:Ribosomal protein S15 isoform	Q8UW22
SNRPF:Small nuclear ribonucleoprotein F	S55053
Keratin 5	Q5XHE8
Rpl36: 60S ribosomal protein L36	Q66KU4
dynl1:dynein, light chain, LC8-type 1	Q6GPR8
Rpl9:ribosomal protein L9	Q7ZWY6
Rpl15	Q7ZWZ7
homer2	Q7ZWP9
nmp200	Q7ZXW4
Cirbp: Cold-inducible RNA-binding protein A	Q7ZYU7
polr2b: polymerase (RNA) II (DNA directed) polypeptide B, 140kDa	Q6PA46
rpl36a: ribosomal protein L36a	Q66KU5
Wtap	Q4KLT6
Ppia:peptidylprolyl isomerase A (cyclophilin A)	Q8AVP8
Rpl8: Ribosomal protein 8	RL8
MGC85168	Q5EAV1
fgfr1op: FGFR1 oncogene partner	Q3KPN4
Cs: citrate synthase, mitochondrial	Q7ZWZ5
Rpl10:ribosomal protein L10	Q7ZXX4
Syc1: SCY1-like protein 1	Q6DKA9
Katnb1:Katanin p80 WD40-containing subunit B1	Q4V7Y7
Rpl3: ribosomal protein L3	Q7ZYR1
rps9:ribosomal protein S9	Q6GNX6
Snrpd1: small nuclear ribonucleoprotein D1 polypeptide 16kDa	Q6GR62
MGC115579	Q4QQY0
rpl35: ribosomal protein L35	Q4FZQ7
Snrpe: small nuclear ribonucleoprotein polypeptide E	Q6GPZ6
rab11b.2: RAB11B, member RAS oncogene family, gene 2	Q5M991
KBTBD2:kelch repeat and BTB (POZ) domain containing 2	Q61R89
syt12: synaptotagmin-like 2	Q640J7
polr21	Q6FHX3
LOC443683	Q6GN49
Rpl35a:60S ribosomal protein L35a	R5XL32
TPM3	Q5U4J6