

SUPPORTING INFORMATION

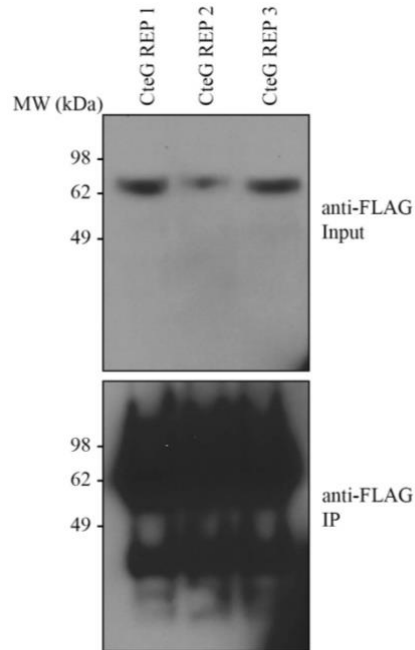


Fig. S1. Check of CteG-FLAG expression for AP-MS samples. IP of FLAG-tagged CteG from HeLa cells infected with *C.t.* expressing FLAG-tagged CteG. A portion of the three replicates sent for mass spectrometry.

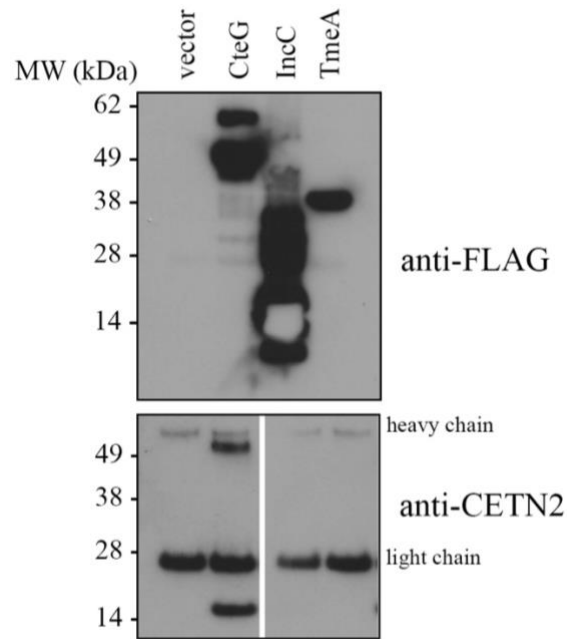


Fig. S2. CteG co-IPs with endogenous CETN2. Co-IP of FLAG-tagged effectors from HeLa cells infected with *C.t.* expressing the FLAG-tagged vector, CteG, IncC, or TmeA. Blot probed with antibody against CETN2 to look for endogenous interaction with *C.t.* effectors. CETN2 is ~19kDa.

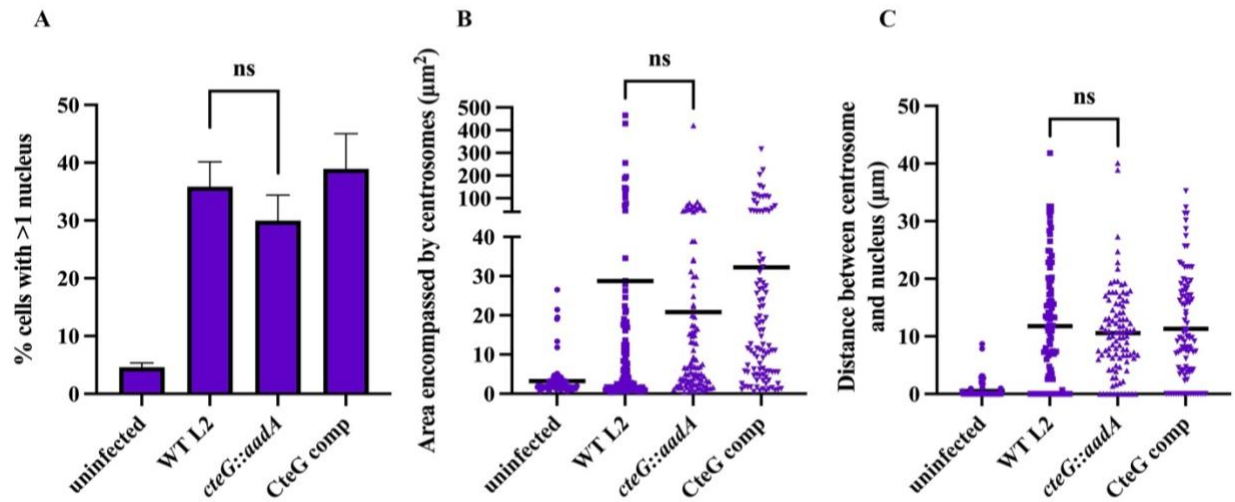


Fig. S3. CteG does not affect multinucleation, centrosome clustering, or centrosome distribution. (A) Quantification of cells with multinucleation (>1) at 36 hours post infection in A2EN cells represented as percent of total cells. Error bars are SD. Data are representative of 2 replicates. (B) Measurement of the area encompasses by centrosomes in A2EN cells. Black bars represent the mean. Data are representative of 100 counted cells. (C) Measurement of the distance between centrosomes to the nearest edge of the nucleus in A2EN cells. Black bars represent the mean. Data are representative of 100 counted cells. (A-C) Significance was determined using one-way ANOVA followed by Tukey's multiple comparisons test.

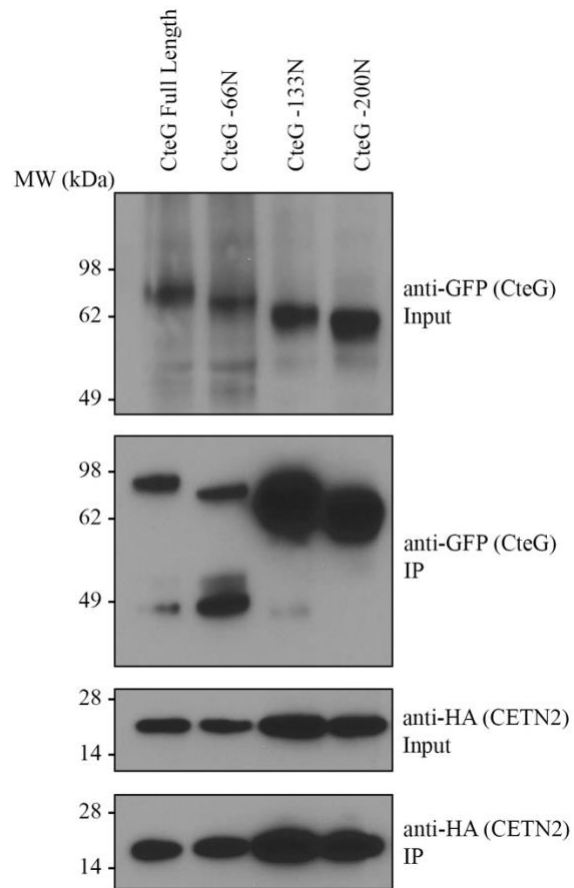


Fig. S4. N-terminus is dispensable for CteG interaction with CETN2. Co-IP of HA-tagged CETN2 from HeLa cells co-transfected with GFP-tagged CteG truncations and CETN2-HA.

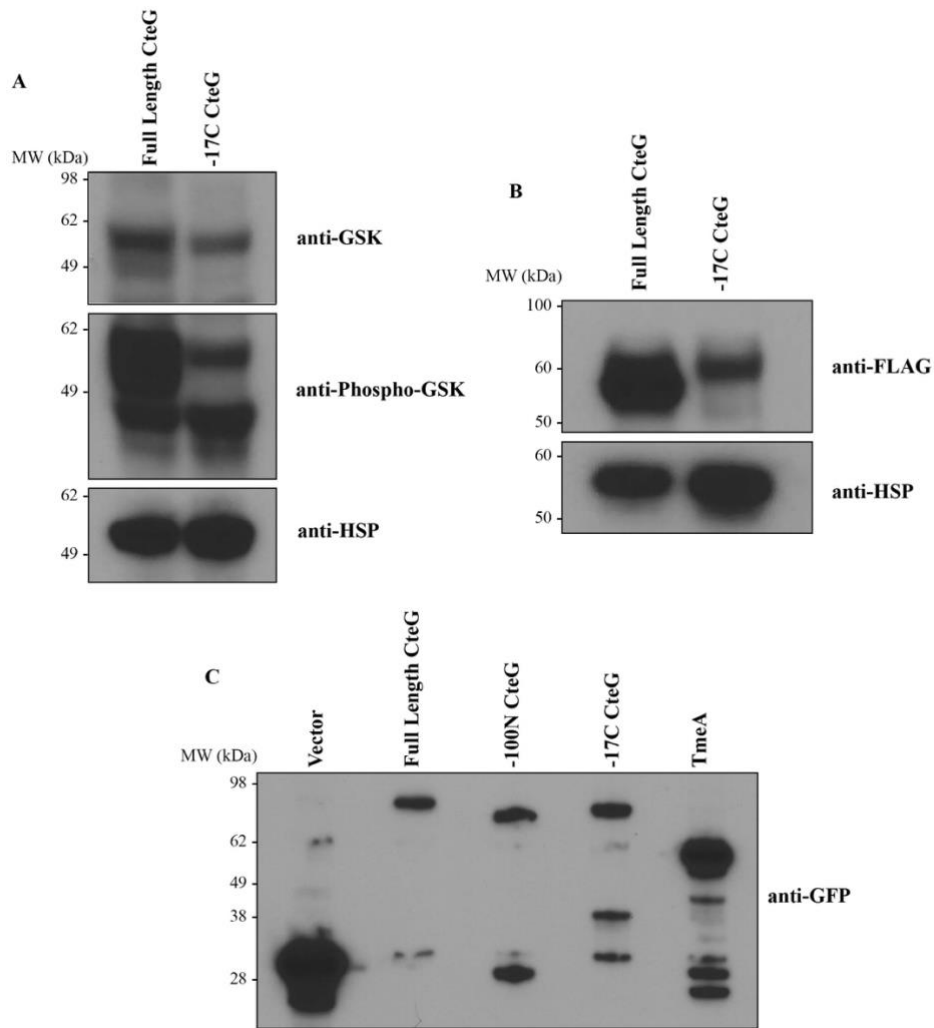


Fig. S5. CteG Full Length (FL) and -17C are secreted and expressed similarly in infection and by transfection. (A) Lysates from HeLa cells infected with FL or -17C GSK-tagged CteG expressing *C.t.* were probed with anti-GSK or Phospho-GSK antibodies to look at expression and secretion, respectively. Anti-HSP used as a loading control. (B) Lysates from HeLa cells infected with FL or -17C FLAG-tagged CteG expressing *C.t.* were probed with anti-FLAG to look at expression levels. Anti-HSP used as a loading control. (C) Lysates from HeLa cells transfected with GFP-tagged CteG constructs, empty vector, or TmeA. were probed with anti-GFP to assess expression levels.

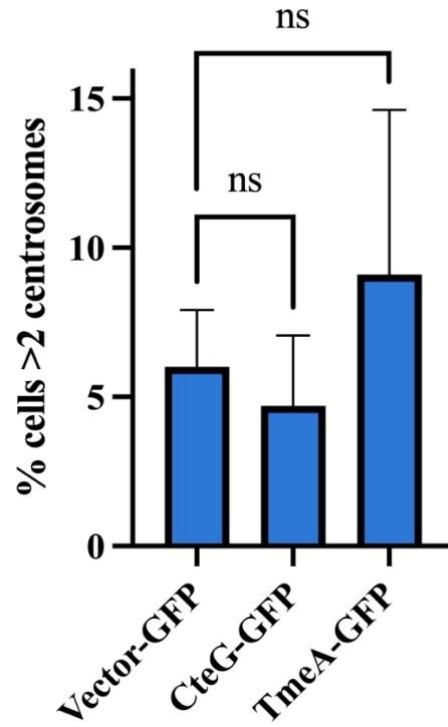


Fig. S6. CteG is not sufficient to induce centrosome amplification. Quantification of cells with supernumerary centrosomes (>2) at 36 hours post transfection in HeLa cells transfected with GFP-tagged empty vector, CteG, or TmeA.

Table S1. Primers used in this study.

Name	Use	Sequence
CT144 33/34s	TargeTron mutagenesis	TTCCCCTCTAGAAAAAAGCTTATAATTATCCTTAA CTATCGATGTTGTGCGCCAGATAGGGTGTAAAG TCAAGTAGTTTAAGGTACTACTCTGTAAGATAAC ACAGAAAACAGCCAACCTAACCGAAAAGCGAAA GCTGATACGGGAACAGAGCACGGTTGGAAAGCG ATGAGTTACCTAAAGACAATCGGGTACGACTGAG TCGCAATGTTAATCAGATATAAGGTATAAGTTGT GTTTACTGAACGCAAGTTTCTAATTTTCGATTATAG TTCGATAGAGGAAAGTGTCTGAAACCTCTAGTAC AAAGAAAGGTAAGTTAGAAACATCGACTTATCTG TTATCACCACATTTGTACAATCTG
LtrB F	TargeTron mutagenesis	TTCCCCTCTAGAAAAAAGCTTATAATTATCCTTA
LtrB R	TargeTron mutagenesis	CAGATTGTACAAATGTGGTGATAACAGATAAGTC
pYEp13 sequencing F	Yeast suppressor screen sequencing	ACTACGCGATCATGGCGA
pYEp13 sequencing R	Yeast suppressor screen sequencing	TGATGCCGGCCACGATGC
APC2 HindIII F	Yeast suppressor screen	CCAAGCTTATGTCATTTTCAGATTACCCCAAC
APC2 Sall R	Yeast suppressor screen	CCGTCGACTCATGAGTTTTTATGCCCATTTT
CETN2 KpnI F	CETN2 truncations	CCGGTACCATGGCCTCCAACTTAAGAAGGC
CETN2 XhoI R	CETN2 truncations	CCCTCGAGTTAATAGAGGCTGGTCTTTTTTCAT
CETN2 1-133 XhoI R	CETN2 truncations	CCCTCGAGTTACCAACTCCTTGCCACGC
CETN2 1-100 XhoI R	CETN2 truncations	CCCTCGAGTTATTTCTCAGACATTTTCTGGGTCA
CETN2 1-149 XhoI R	CETN2 truncations	CCCTCGAGTTAAGCTTCATCAATCATTTCCTGC
CETN2 1-162 XhoI R	CETN2 truncations	CCCTCGAGTTAGAACTCTTGCTCACTGACCTCTC
CETN2 33-172 KpnI F	CETN2 truncations	CCGGTACCCGGAAGCTTTTGATCTTTTCG
CETN2 66-172 KpnI F	CETN2 truncations	CCGGTACCGAAGAAATTAAGAAAATGATAAG
CETN2 NotI F	protein purification cloning	CCGCGCCCGCATGGCCTCCAACTTAAGAAGGC
CETN2 Sall R	protein purification cloning	CCGTCGACATAGAGGCTGGTCTTTTTTC
CteG +1 KpnI F	Yeast suppressor screen	CCGGTACCAATGTCATTTGGTATTGGTAGTGCTT
CteG XbaI R	Yeast suppressor screen/Ectopic expression	CCTCTAGACTAGATAGAGGAGCTTTGCACAC
CteG KpnI F	Ectopic Expression	CCGGTACCATGTCATTTGGTATTGGTAGTGCT
CteG NotI F	CteG truncations/ pBomb4 plasmid cloning, GSK cloning, protein purification cloning	CCGCGCCCGCATGTCATTTGGTATTGGTAGTGCTT

CteG FLAG KpnI R	CteG truncations, GSK cloning	CCGGTACCTTACTTATCGTCGTCATCCTTGTAAATC GATAGAGGAGCTTTGCACACCT
CteG FLAG Sall R	CteG truncations/ pBomb4 plasmid cloning	CCGTCGACTTACTTATCGTCGTCATCCTTGTAAATC GATAGAGGAGCTTTGCACACCT
CteG Sall R	protein purification cloning	CCGTCGACCTAGATAGAGGAGCTTTGCACA
CteG -100N KpnI F	CteG truncations	CCGGTACCGGAGTAAGTCTTACATCTATATC
CteG -66N KpnI F	CteG truncations	CCGGTACCCCAATGGTAGGGACGTACTIONCAG
CteG -133N KpnI F	CteG truncations	CCGGTACCTCTGCAAGAGGTGCTGGTTCC
CteG -200N KpnI F	CteG truncations	CCGGTACCTTTCTTGCTTTAGGAGGAT
CteG -66C XbaI R	CteG truncations	CCTCTAGAGGATGATTGCAAATGCGTTAAAC
CteG -133C XbaI R	CteG truncations	CCTCTAGACTTACAAAGAAGCATGGTCAACT
CteG -200C XbaI R	CteG truncations	CCTCTAGAACCGCCTGCTAATCCGCTG
CteG -17C FLAG Sall R	pBomb4 plasmid cloning	CCGTCGACTTACTTATCGTCGTCATCCTTGTAAATC TTCTCTCATAAGATCTTTACTTT
CteG -33C FLAG Sall R	pBomb4 plasmid cloning	CCGTCGACTTACTTATCGTCGTCATCCTTGTAAATC CTCTAATAGGGATAGGAAAGAAC
CteG -50C FLAG Sall R	pBomb4 plasmid cloning	CCGTCGACTTACTTATCGTCGTCATCCTTGTAAATC ACGCACTTCTGCTCGAGTTCTGT
TmeA KpnI F	Ectopic expression	CCGGTACCATGAGTATTTCGACCTACTAATGGGAG
TmeA NotI R	Ectopic expression	CCGCGGCCGCGTCTAAGAAAACAGAAGAAGTT
TmeA KpnI +1 F	Yeast suppressor screen	CCGGTACCAATGAGTATTTCGACCTACTAATGGGA G
TmeA XbaI R	Yeast suppressor screen	CCTCTAGATTAGTCTAAGAAAACAGAAGAAGTTA TGAC
TmeA Not F	pBomb4 plasmid cloning	CCGCGGCCGCGATGAGTATTTCGACCTACTAATGGG AG
TmeA Flag Sall R	pBomb4 plasmid cloning	CCGTCGACTTACTTATCGTCGTCATCCTTGTAAATC GTCTAAGAAAACAGAAGAAGTTATGAC
IncC NotI F	pBomb4 plasmid cloning	CCGCGGCCGCGATGACGTACTIONCTATGTCCGATA
IncC FLAG Sall R	pBomb4 plasmid cloning	CCGTCGACTTACTTATCGTCGTCATCCTTGTAAATC GCTTACATATAAAGTTTGAGGAT
CpoS Sall F	protein purification cloning	GACGCGTCGACCTTGCTAGAGCACGAAGTCGT
CpoS NotI R	protein purification cloning	GACGCGCGGCCGCTTTTTTACGACGGGATGCCTG

Table S2. Complete list of filtered AP-MS peptides for CteG.

Protein Description	Accession	Database	Avg. Score	Mass	Avg. Num. of Sig. Matches	Avg. Num. of Sig. Sequences
Actin, cytoplasmic 2	P63261	UniProt_Human	2445	41766	77	20
Type III secretion system protein	A0A654L4P8	Chlamydia_trachomatis_L2434Bu	1049	41172	28	15
Centrin-2	P41208	UniProt_Human	844	19726	21	9
Putative RNA-binding protein Luc7-like 2	Q9Y383	UniProt_Human	681	46486	20	10
Filamin-A	Q60FE5	UniProt_Human	493	278053	20	16
Tropomodulin-3	Q9NYL9	UniProt_Human	428	39570	13	10
Uncharacterized <i>C.t.</i> protein	A0A654L6L6	Chlamydia_trachomatis_L2434Bu	425	68204	11	7
Peptidyl-prolyl cis-trans isomerase B	P23284	UniProt_Human	312	23728	11	8
Girdin	A0A2R8Y7B1	UniProt_Human	243	185366	9	7
Cleavage and polyadenylation specificity factor subunit 6	F8WJN3	UniProt_Human	456	52238	7	4
Activated RNA polymerase II transcriptional coactivator p15	P53999	UniProt_Human	173	14386	7	6
ATP synthase subunit alpha, mitochondrial (Fragment)	K7EK77	UniProt_Human	131	22186	6	6
4F2 cell-surface antigen heavy chain	J3KPF3	UniProt_Human	186	68059	5	4
Transaldolase	A0A654L6E7	Chlamydia_trachomatis_L2434Bu	252	36138	5	4
60S acidic ribosomal protein P2	P05387	UniProt_Human	141	11658	4	4
Molecular chaperone DnaK	A0A654L6Q8	Chlamydia_trachomatis_L2434Bu	147	70800	4	4
FACT complex subunit SPT16	Q9Y5B9	UniProt_Human	88	119838	4	4
Keratin, type I cytoskeletal 9	P35527	UniProt_Human	252	62027	4	4

Signal recognition particle receptor subunit beta (Fragment)	H7C4H2	UniProt_Human	157	17602	4	4
Peptidyl-prolyl cis-trans isomerase A	P62937	UniProt_Human	110	18001	4	3
Importin-9	Q96P70	UniProt_Human	91	115889	4	2
Protein disulfide-isomerase A3	P30101	UniProt_Human	102	56747	4	4
Ribosomal protein L19	J3KTE4	UniProt_Human	154	23233	4	3
60S ribosomal protein L7a (Fragment)	Q5T8U3	UniProt_Human	92	21531	3	3
60 kDa chaperonin	A0A654L5L1	Chlamydia_trachomatis_L2434Bu	62	58054	3	3
60S ribosomal protein L23a (Fragment)	H7BY10	UniProt_Human	86	17792	3	2
60S ribosomal protein L13	P26373	UniProt_Human	81	24247	3	3
Calmodulin-1	P0DP23	UniProt_Human	143	16827	3	3
40S ribosomal protein S6	A2A3R5	UniProt_Human	85	24953	3	3
Cofilin, non-muscle isoform (Fragment)	E9PP50	UniProt_Human	102	17766	3	3
Peptidyl-prolyl cis-trans isomerase-like 4	Q8WUA2	UniProt_Human	59	57189	3	2
Putative RNA-binding protein Luc7-like 1	Q9NQ29	UniProt_Human	122	43701	3	2
50S ribosomal protein L16	A0A654L7G0	Chlamydia_trachomatis_L2434Bu	134	15765	3	3
Adenosylmethionine decarboxylase	A0A5F9ZHD5	UniProt_Human	111	53138	3	3
Molecular chaperone GrpE	A0A654L6N2	Chlamydia_trachomatis_L2434Bu	87	21655	3	2
Mediator of RNA polymerase II transcription subunit 1	Q15648	UniProt_Human	181	168373	3	2
Spectrin beta chain	A0A087WUZ3	UniProt_Human	75	274659	3	2
Molecular chaperone DnaJ	A0A654L6M8	Chlamydia_trachomatis_L2434Bu	93	41890	3	3
Heat shock 70 kDa protein 1B	A0A0G2JIW1	UniProt_Human	89	70066	3	3
60S ribosomal protein L28	H0YKD8	UniProt_Human	57	19060	3	2

Importin subunit beta-1 (Fragment)	J3QR48	UniProt_Human	78	16388	2	2
S-adenosylmethionine synthase isoform type-2	P31153	UniProt_Human	129	43633	2	2
HLA class I histocompatibility antigen, A alpha chain	A0A0G2JPD3	UniProt_Human	97	44397	2	2
Dihydropteroate synthase	A0A654L9I1	Chlamydia_trachomatis_L2434Bu	80	50230	2	2
Centrin-3	E5RJF8	UniProt_Human	59	22409	2	2
ATP synthase subunit d, mitochondrial	F5H608	UniProt_Human	55	8910	2	2
30S ribosomal protein S10	A0A654L6R0	Chlamydia_trachomatis_L2434Bu	61	11862	2	2
Pre-mRNA-splicing factor 38A	Q8NAV1	UniProt_Human	44	37453	2	2
50S ribosomal protein L21	A0A654L7I1	Chlamydia_trachomatis_L2434Bu	62	12155	2	2
Membrane protein	A0A654LGL6	Chlamydia_trachomatis_L2434Bu	98	17529	2	1
Catenin (Cadherin-associated protein), alpha 1, isoform CRA_a	G3XAM7	UniProt_Human	125	92663	2	2
Albumin	A0A087WWT3	UniProt_Human	94	45118	2	1
Dehydrogenase	A0A654L7A9	Chlamydia_trachomatis_L2434Bu	73	26816	2	2
Histone H1.2	P16403	UniProt_Human	75	21352	2	2
FACT complex subunit SSRP1	Q08945	UniProt_Human	69	81024	2	2
50S ribosomal protein L17	A0A654L6Q2	Chlamydia_trachomatis_L2434Bu	59	16142	2	2
Spindlin interactor and repressor of chromatin-binding protein	Q9BUA3	UniProt_Human	73	41011	2	2
60 kDa heat shock protein, mitochondrial	P10809	UniProt_Human	39	61016	2	2
50S ribosomal protein L13	A0A654L5X5	Chlamydia_trachomatis_L2434Bu	54	16839	2	2

Membrane-associated progesterone receptor component 1	O00264	UniProt_Human	68	21658	2	2
30S ribosomal protein S9	A0A654L6N5	Chlamydia_trachomatis_L2434Bu	56	14533	2	2
Vimentin	P08670	UniProt_Human	58	53619	2	2
Calcium homeostasis endoplasmic reticulum protein	J3QK89	UniProt_Human	61	104868	2	1
60S ribosomal protein L21	P46778	UniProt_Human	34	18553	2	2
60S ribosomal protein L26	J3KSS0	UniProt_Human	31	7570	2	1
Pre-mRNA 3'-end-processing factor FIP1 (Fragment)	H0Y8P7	UniProt_Human	116	29476	2	2
Brain acid soluble protein 1	P80723	UniProt_Human	99	22680	2	2
Serine/threonine-protein phosphatase 6 regulatory subunit 1	Q9UPN7	UniProt_Human	107	96664	2	2
Ras-related protein Rab-5C	P51148	UniProt_Human	89	23468	2	1
Preproteins translocase J	A0A654L770	Chlamydia_trachomatis_L2434Bu	73	35489	2	1
60S ribosomal protein L34	P49207	UniProt_Human	44	13284	2	1
40S ribosomal protein S12	P25398	UniProt_Human	105	14505	2	1
60S ribosomal protein L5 (Fragment)	A0A2R8Y6J3	UniProt_Human	42	27028	2	2
eIF-2-alpha kinase activator GCN1	Q92616	UniProt_Human	41	292572	2	2
Uncharacterized <i>C.t.</i> protein	A0A654LIJ4	Chlamydia_trachomatis_L2434Bu	52	32014	2	2
Importin-8	F5H815	UniProt_Human	26	3990	2	2