

LEGENDS TO SUPPLEMENTAL FIGURES

Figure S1: Visualization, after epon-embedding, of filamentous structures around the nucleus. Control non-transfected HeLa cell (A), pCDNA3.1/endoB2 transfected cell (B, C). Note in panel (B) the accumulation of electron-dense structures partly surrounding the nucleus (arrowheads) and their absence in the control cell. The region delimited with a white box is magnified in (C) to highlight the high density of the filamentous network and corresponds to a larger field of the view shown in Fig. 1B, panel f.

Figure S2: EndoB2-St affinity-purified proteins from HeLa/endoB2-St cell lysates identified by mass spectrometry. (A) Partial list of proteins selected for the highest score and highest number of matching peptides and identified in two independent samples from HeLa/endoB2-St cell lysates. Note that endogenous endophilin B1, a molecular partner of endoB2 is present in the material retained on the affinity matrix. (B) Partial sequence coverage by peptides identified in human plectin. Six peptides (1-9, 129-138, 301-307, 301-316, 326-336, and 350-387) are underlined on the aligned sequences of the 9 human plectin isoforms (up to aminoacid positions 245-414). Identified peptides specific for plectin isoform 1 (gene name PLEC1) at the N-terminal sequence of the protein are highlighted in pink. Other peptides are shown in red. In the N-terminal region of plectin 1 (residues 1-174) (with no homology in the nine isoforms), only pink stretches 1-9 and 129-138 were detected.

Figure S3: Plectin siRNA interference and incidence on the vimentin network. HeLa/endoB2-St cells were transfected with control or plectin-1 siRNAs for 72h. Cells were processed for immunofluorescence using the indicated antibodies and images from z-sections were taken using a 20x objective to visualize large fields. Note in the top right panel the heterogeneity of plectin expression with, as in Fig. 8A, the presence of cells expressing plectin at the detection limit. The 3 images of the bottom panels (anti-vimentin) obtained from cells treated with si plectin-1 illustrate the bundling of vimentin filaments whose length generally exceeds the longest nucleus axis (for measurements, nuclei were stained with dapi (not shown)). Scale bar: 20 μ m.

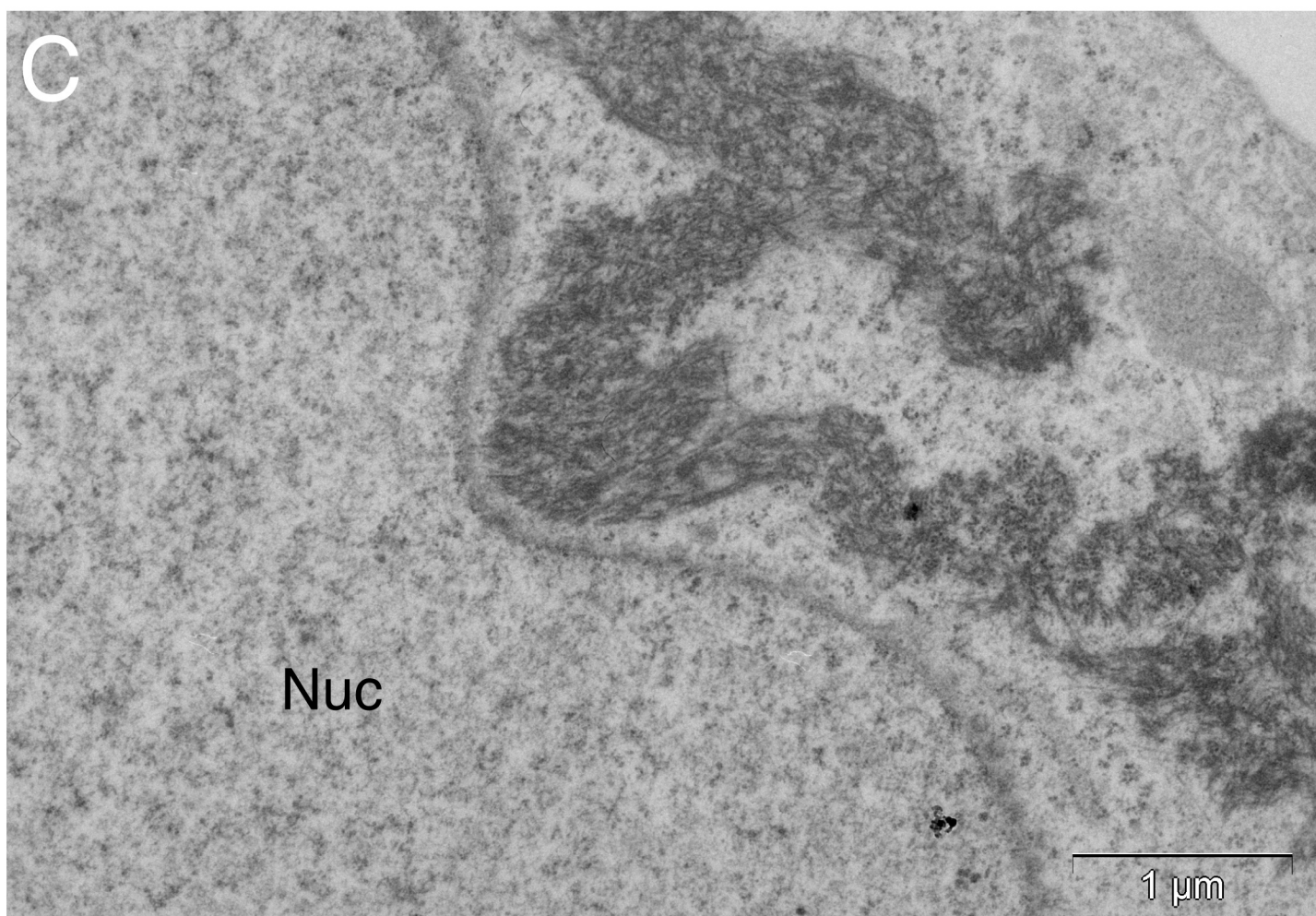
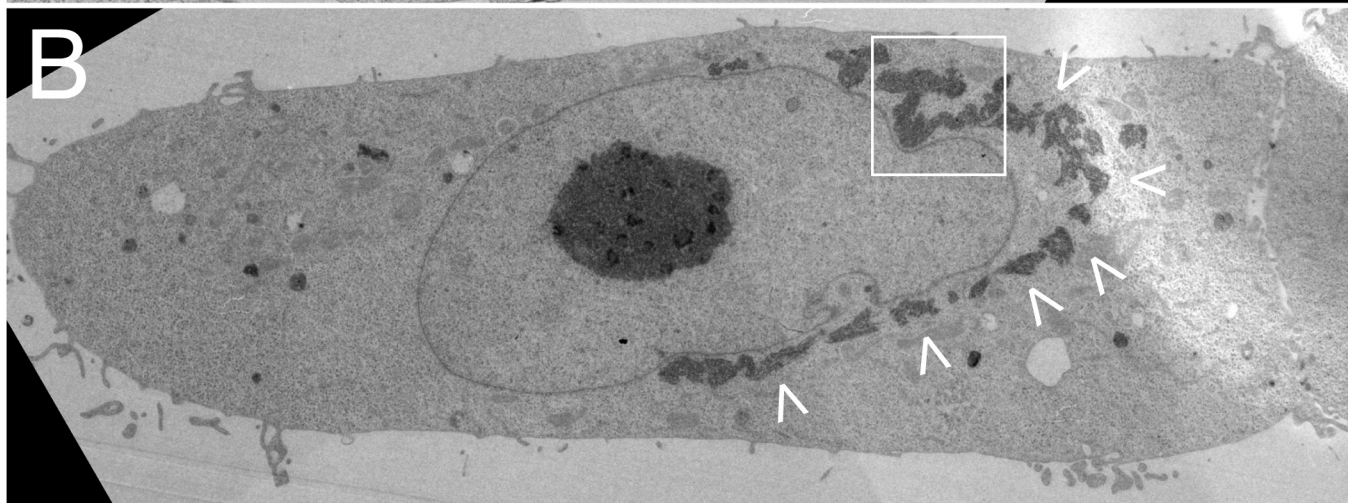
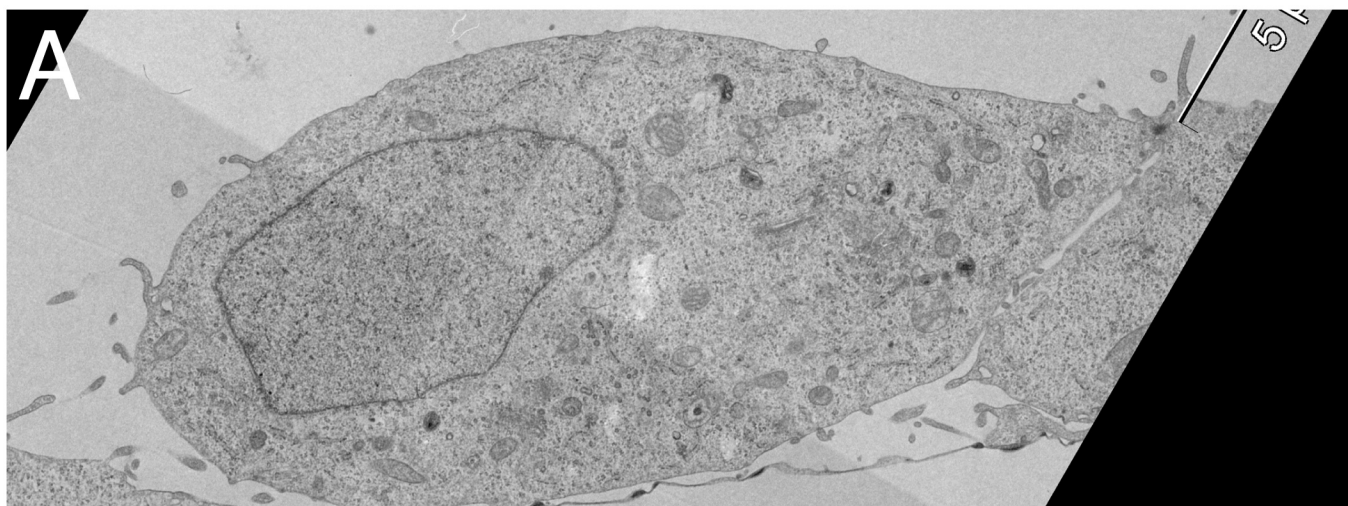


Figure S1

Figure S2

A

Protein name	Accession number	Score	Sequence Coverage (%)	No of Peptide matched	Amino-acid number	MW [kDa]
Endophilin B2 OS=Homo sapiens GN=SH3GLB2	Q9NR46	892.01	70.13	29	395	43.94
Plectin 1 OS=Homo sapiens GN=PLEC1	Q15149	1673.73	21.84	81	4684	531.46
Vimentin OS=Homo sapiens GN=VIM	P08670	376.49	52.36	23	466	53.619
Ataxin-2-like protein OS=Homo sapiens GN=ATXN2L	Q8WWM7	215.49	19.07	16	1075	113.3
Endophilin B1 OS=Homo sapiens GN=SH3GLB1	Q9Y371	89.53	27.95	7	365	40.77

B

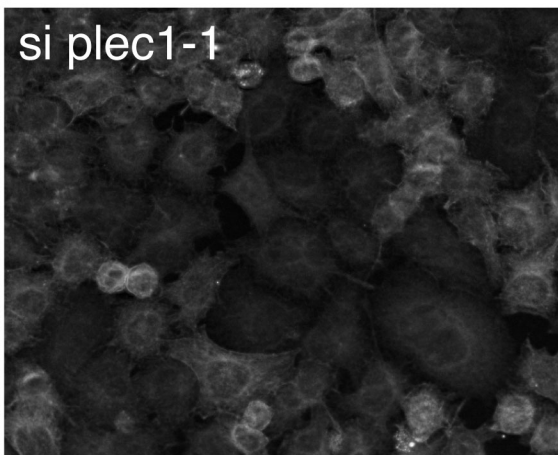
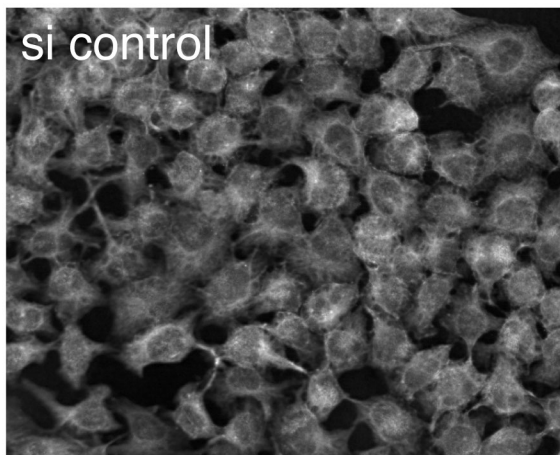
SP	sp	Q15149	PLEC_HUMAN	MVAGMLMPR	DQLRAIYEVLFREGVMVAKKDRRPRSLHHPVPGVTNLQVMRAMASLRARGL	60
SP	sp	Q15149-2	PLEC_HUMAN	-----	-----	
SP	sp	Q15149-3	PLEC_HUMAN	-----	-----	
SP	sp	Q15149-4	PLEC_HUMAN	-----	-----	
SP	sp	Q15149-5	PLEC_HUMAN	-----	-----	
SP	sp	Q15149-6	PLEC_HUMAN	-----	-----	
SP	sp	Q15149-7	PLEC_HUMAN	-----	-----	
SP	sp	Q15149-8	PLEC_HUMAN	-----	-----	
SP	sp	Q15149-9	PLEC_HUMAN	-----	-----	
SP	sp	Q15149	PLEC_HUMAN	VRETFAWCHFYWYLTNEGIAHLRQYLHLPPEIVPASLQVRVRPVAMVMPARRTPHVQA--	118	
SP	sp	Q15149-2	PLEC_HUMAN	-----MSG-EDA-EVRAVS	12	
SP	sp	Q15149-3	PLEC_HUMAN	-----MSG-EDA-EVRAVS	12	
SP	sp	Q15149-4	PLEC_HUMAN	-----		
SP	sp	Q15149-5	PLEC_HUMAN	-----		
SP	sp	Q15149-6	PLEC_HUMAN	-----MSG-A-----	4	
SP	sp	Q15149-7	PLEC_HUMAN	-----		
SP	sp	Q15149-8	PLEC_HUMAN	-----		
SP	sp	Q15149-9	PLEC_HUMAN	-----		
SP	sp	Q15149	PLEC_HUMAN	---VQGPLGSPPK	RGPLPTEQRVYRKELEEVS--PETPVVPATTQRTLARPGPEPAPAT	174
SP	sp	Q15149-2	PLEC_HUMAN	EDVSNNGSSGSPSPGDTLPWNLTKTQSRSSGGGAGSNGSVLDP----	A---ERAVIRIA	64
SP	sp	Q15149-3	PLEC_HUMAN	EDVSNNGSSGSPSPGDTLPWNLTKTQSRSSGGGAGSNGSVLDP----	A---ERAVIRIA	64
SP	sp	Q15149-4	PLEC_HUMAN	---MSHQQLRVVQ-----PEGLGR-----	KRTSSEDNL-----YLAVLRASEGKK	37
SP	sp	Q15149-5	PLEC_HUMAN	-----MEPSGSLFPPSLVV-----	VGHVVTAAV-WH-----WRRGRRWAQDEQ	37
SP	sp	Q15149-6	PLEC_HUMAN	-----GGAFASPREVL-----L-ERPCLWDGGCE-----	PA-----RRGYLYQQLCCV	41
SP	sp	Q15149-7	PLEC_HUMAN	-----	MKIIVP	5
SP	sp	Q15149-8	PLEC_HUMAN	-----	MDP-----SRATQNETSSLK	15
SP	sp	Q15149-9	PLEC_HUMAN	-----	MAGPLPDEQDF-----IQAYEEVREKYK	23
SP	sp	Q15149	PLEC_HUMAN	DERDRVQKKTFTKWNKHLIKAQRHISDLYEDLRDGHNLISLLEVLSGDGLPREKGRMR	234	
SP	sp	Q15149-2	PLEC_HUMAN	DERDRVQKKTFTKWNKHLIKAQRHISDLYEDLRDGHNLISLLEVLSGDGLPREKGRMR	124	
SP	sp	Q15149-3	PLEC_HUMAN	DERDRVQKKTFTKWNKHLIKAQRHISDLYEDLRDGHNLISLLEVLSGDGLPREKGRMR	124	
SP	sp	Q15149-4	PLEC_HUMAN	DERDRVQKKTFTKWNKHLIKAQRHISDLYEDLRDGHNLISLLEVLSGDGLPREKGRMR	97	
SP	sp	Q15149-5	PLEC_HUMAN	DERDRVQKKTFTKWNKHLIKAQRHISDLYEDLRDGHNLISLLEVLSGDGLPREKGRMR	97	
SP	sp	Q15149-6	PLEC_HUMAN	DERDRVQKKTFTKWNKHLIKAQRHISDLYEDLRDGHNLISLLEVLSGDGLPREKGRMR	101	
SP	sp	Q15149-7	PLEC_HUMAN	DERDRVQKKTFTKWNKHLIKAQRHISDLYEDLRDGHNLISLLEVLSGDGLPREKGRMR	65	
SP	sp	Q15149-8	PLEC_HUMAN	DERDRVQKKTFTKWNKHLIKAQRHISDLYEDLRDGHNLISLLEVLSGDGLPREKGRMR	75	
SP	sp	Q15149-9	PLEC_HUMAN	DERDRVQKKTFTKWNKHLIKAQRHISDLYEDLRDGHNLISLLEVLSGDGLPREKGRMR	83	

SP	sp	Q15149	PLEC_HUMAN	HKLQNVQIALDYLRHRQVKLVNIRNDDIADGNPKLTGLGIWTIILHFQISDIQVSGQSED	294	
SP	sp	Q15149-2	PLEC_HUMAN	HKLQNVQIALDYLRHRQVKLVNIRNDDIADGNPKLTGLGIWTIILHFQISDIQVSGQSED	184	
SP	sp	Q15149-3	PLEC_HUMAN	HKLQNVQIALDYLRHRQVKLVNIRNDDIADGNPKLTGLGIWTIILHFQISDIQVSGQSED	184	
SP	sp	Q15149-4	PLEC_HUMAN	HKLQNVQIALDYLRHRQVKLVNIRNDDIADGNPKLTGLGIWTIILHFQISDIQVSGQSED	157	
SP	sp	Q15149-5	PLEC_HUMAN	HKLQNVQIALDYLRHRQVKLVNIRNDDIADGNPKLTGLGIWTIILHFQISDIQVSGQSED	157	
SP	sp	Q15149-6	PLEC_HUMAN	HKLQNVQIALDYLRHRQVKLVNIRNDDIADGNPKLTGLGIWTIILHFQISDIQVSGQSED	161	
SP	sp	Q15149-7	PLEC_HUMAN	HKLQNVQIALDYLRHRQVKLVNIRNDDIADGNPKLTGLGIWTIILHFQISDIQVSGQSED	125	
SP	sp	Q15149-8	PLEC_HUMAN	HKLQNVQIALDYLRHRQVKLVNIRNDDIADGNPKLTGLGIWTIILHFQISDIQVSGQSED	135	
SP	sp	Q15149-9	PLEC_HUMAN	HKLQNVQIALDYLRHRQVKLVNIRNDDIADGNPKLTGLGIWTIILHFQISDIQVSGQSED	143	

SP	sp	Q15149	PLEC_HUMAN	MTAKEKLLLSQRMVEGYQGLRCDNFTSSWRDGRLFNAIHRHKPLLDNMKVYRQTNLE	354	
SP	sp	Q15149-2	PLEC_HUMAN	MTAKEKLLLSQRMVEGYQGLRCDNFTSSWRDGRLFNAIHRHKPLLDNMKVYRQTNLE	244	
SP	sp	Q15149-3	PLEC_HUMAN	MTAKEKLLLSQRMVEGYQGLRCDNFTSSWRDGRLFNAIHRHKPLLDNMKVYRQTNLE	244	
SP	sp	Q15149-4	PLEC_HUMAN	MTAKEKLLLSQRMVEGYQGLRCDNFTSSWRDGRLFNAIHRHKPLLDNMKVYRQTNLE	217	
SP	sp	Q15149-5	PLEC_HUMAN	MTAKEKLLLSQRMVEGYQGLRCDNFTSSWRDGRLFNAIHRHKPLLDNMKVYRQTNLE	217	
SP	sp	Q15149-6	PLEC_HUMAN	MTAKEKLLLSQRMVEGYQGLRCDNFTSSWRDGRLFNAIHRHKPLLDNMKVYRQTNLE	221	
SP	sp	Q15149-7	PLEC_HUMAN	MTAKEKLLLSQRMVEGYQGLRCDNFTSSWRDGRLFNAIHRHKPLLDNMKVYRQTNLE	185	
SP	sp	Q15149-8	PLEC_HUMAN	MTAKEKLLLSQRMVEGYQGLRCDNFTSSWRDGRLFNAIHRHKPLLDNMKVYRQTNLE	195	
SP	sp	Q15149-9	PLEC_HUMAN	MTAKEKLLLSQRMVEGYQGLRCDNFTSSWRDGRLFNAIHRHKPLLDNMKVYRQTNLE	203	

SP	sp	Q15149	PLEC_HUMAN	NLDQAFSVAERDLGVTRLLDPEDVDVPPQPEKSIITYVSSLYDAMPVDPVQDGVRA	414	
SP	sp	Q15149-2	PLEC_HUMAN	NLDQAFSVAERDLGVTRLLDPEDVDVPPQPEKSIITYVSSLYDAMPVDPVQDGVRA	304	
SP	sp	Q15149-3	PLEC_HUMAN	NLDQAFSVAERDLGVTRLLDPEDVDVPPQPEKSIITYVSSLYDAMPVDPVQDGVRA	300	
SP	sp	Q15149-4	PLEC_HUMAN	NLDQAFSVAERDLGVTRLLDPEDVDVPPQPEKSIITYVSSLYDAMPVDPVQDGVRA	277	
SP	sp	Q15149-5	PLEC_HUMAN	NLDQAFSVAERDLGVTRLLDPEDVDVPPQPEKSIITYVSSLYDAMPVDPVQDGVRA	277	
SP	sp	Q15149-6	PLEC_HUMAN	NLDQAFSVAERDLGVTRLLDPEDVDVPPQPEKSIITYVSSLYDAMPVDPVQDGVRA	281	
SP	sp	Q15149-7	PLEC_HUMAN	NLDQAFSVAERDLGVTRLLDPEDVDVPPQPEKSIITYVSSLYDAMPVDPVQDGVRA	245	
SP	sp	Q15149-8	PLEC_HUMAN	NLDQAFSVAERDLGVTRLLDPEDVDVPPQPEKSIITYVSSLYDAMPVDPVQDGVRA	255	
SP	sp	Q15149-9	PLEC_HUMAN	NLDQAFSVAERDLGVTRLLDPEDVDVPPQPEKSIITYVSSLYDAMPVDPVQDGVRA	263	

anti-plectin



anti-vimentin

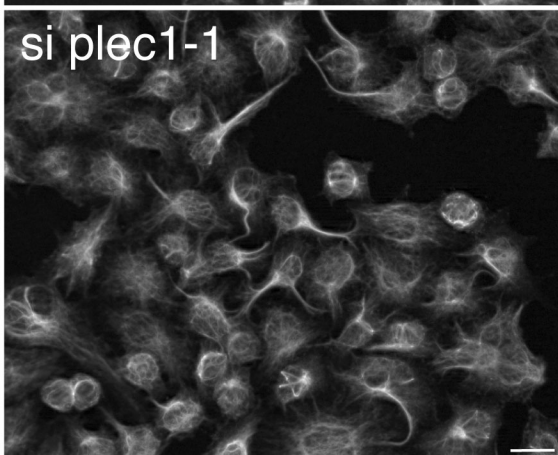
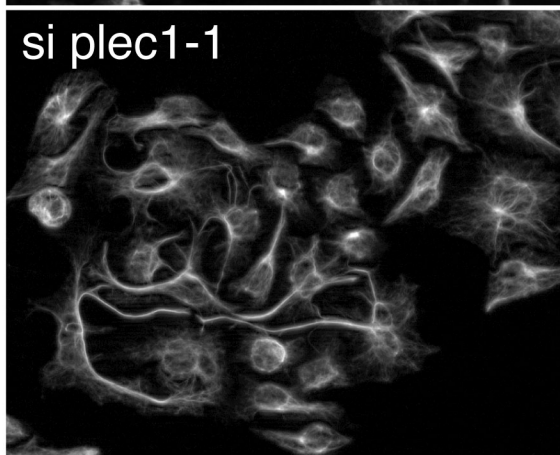
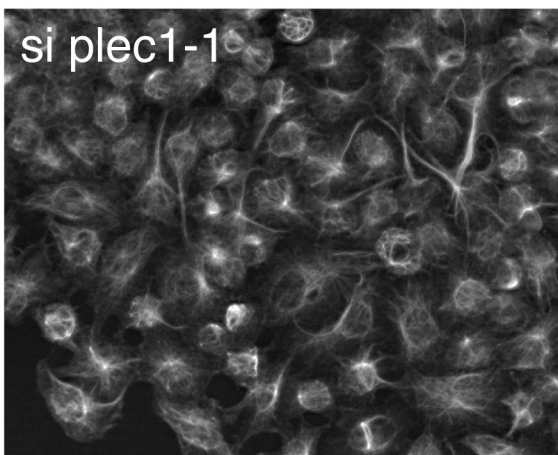
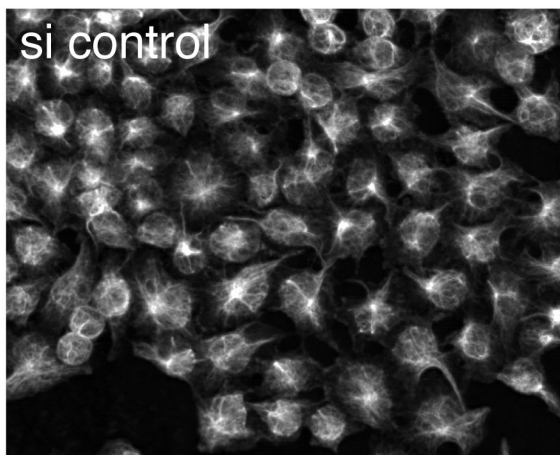


Figure S3