

APPENDIX

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Initiation of DNA replication requires actin dynamics and formin activity

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Appendix Fig S1

A Immunofluorescence images of U2OS cells transfected with the indicated FLAG-tagged actin-NLS constructs. DNA was stained with DAPI, actin-NLS constructs with anti-Flag antibody. Bar, 5 μ m.

B Scatter plots showing the high reproducibility of MS/MS runs between replicates.

Appendix Fig S2

Immunofluorescent images of a time course of nuclear formation in control (Ctl), or Cyt D (CD) or SMIFH2-treated extract; nuclei were stained with Hoechst. Bar, 10 μ m.

Appendix Fig S3

Additional FEISEM images of numerous nuclei formed either in control XEE, or in the presence of Cyt D or SMIFH2.

Appendix Table S1

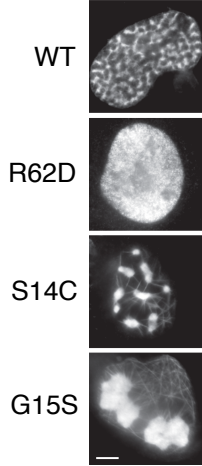
Actin regulators identified in the structure proteome of nuclei.

Appendix Table S2

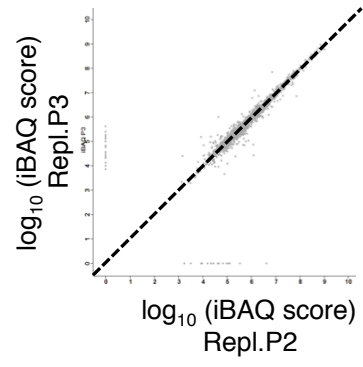
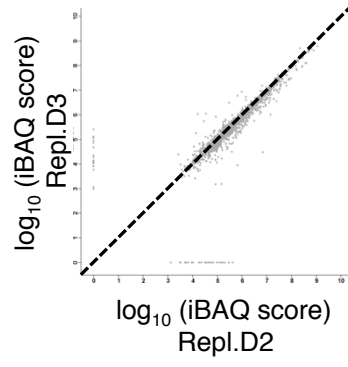
List of formins in the structure proteome of nuclei in our dataset (X. tropicalis database).

Appendix Fig S1

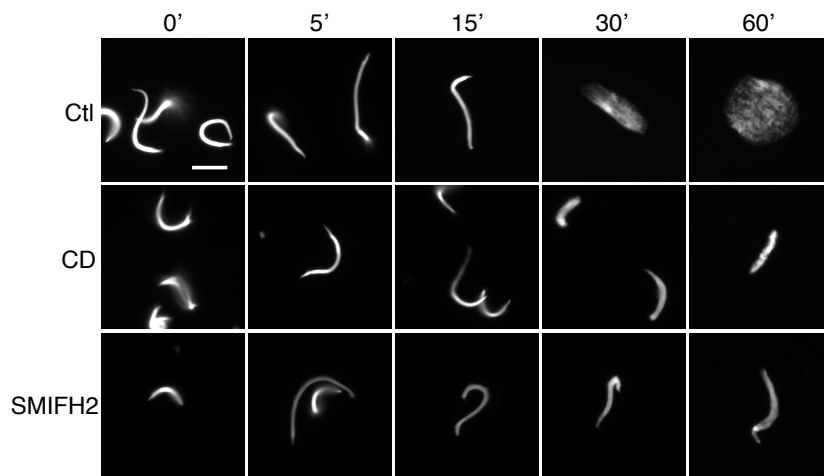
A actin-NLS-FLAG



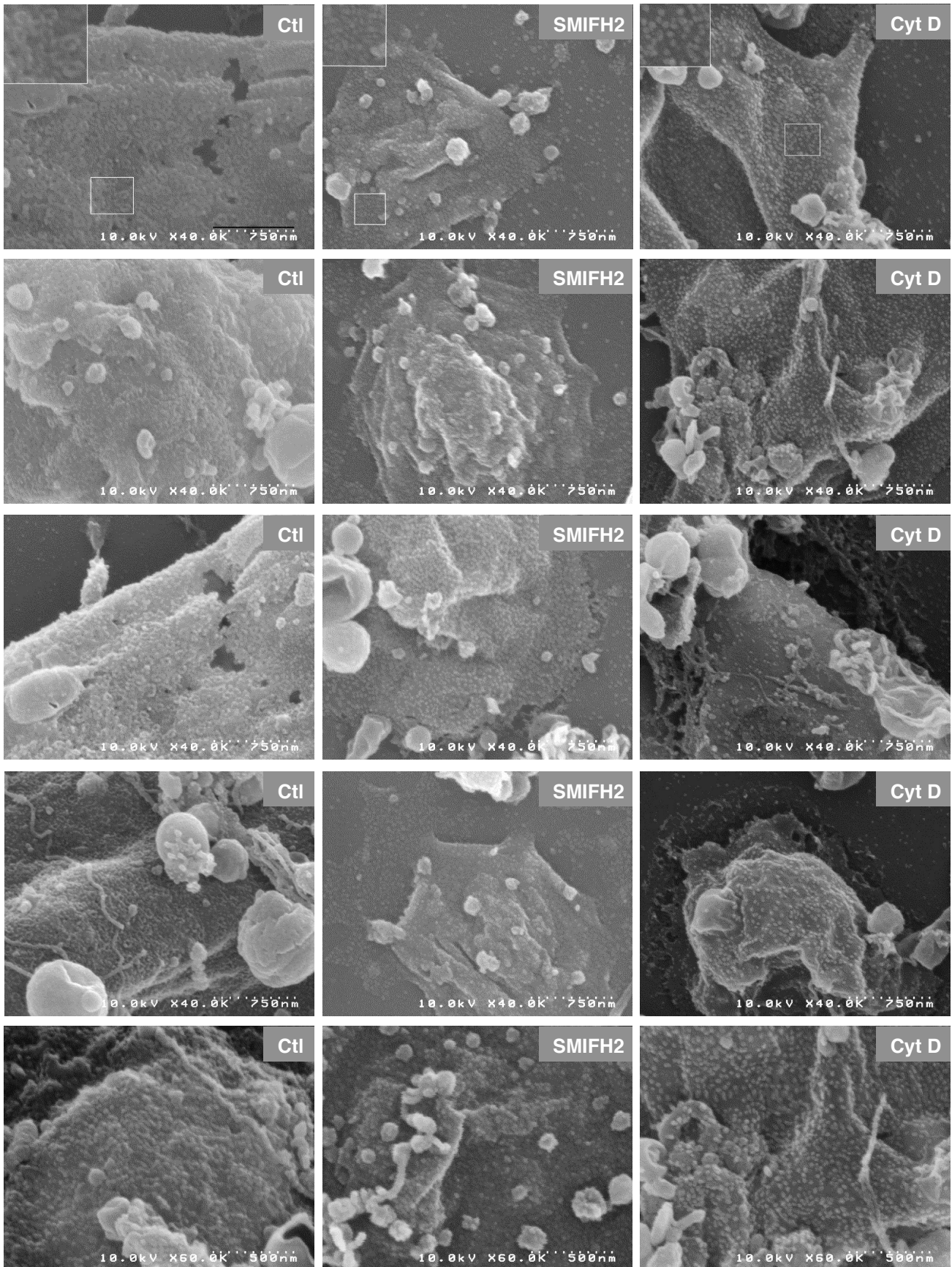
B



Appendix Fig S2



Appendix Fig S3



Appendix Table S1

Protein or gene name	Log₁₀ Mean iBAQ values	
	Ctl	PA (CDK-inhib)
actin-related protein 2-A	8.72	8.84
Actin-related protein 2/3 complex subunit 4	8.56	8.73
ARP3 actin-related protein 3	8.51	8.70
capping protein muscle Z-line. beta – capzb	8.33	8.54
capping protein muscle Z-line. alpha 2	8.12	8.33
Actin-related protein 2/3 complex subunit 2	8.11	8.37
ISWI protein	7.97	8.01
Actin-related protein 2/3 complex subunit 3	7.8	8.04
Actin-related protein 2/3 complex subunit 1A	7.63	7.76
LIM domain and actin binding 1	7.60	7.70
Coronin 1C	7.53	7.64
actinin alpha 4	7.52	7.70
F-actin-capping protein subunit alpha-1	7.51	7.75
actin-like 6A	7.51	7.44
ARP1 actin-related protein 1 homolog A	7.49	7.44
Smarcc1 protein	7.49	7.38
Cortactin – Ctnn	7.43	7.53
Actin-related protein 2/3 complex subunit 5	7.42	7.70
SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily B member 1	7.41	7.38
Cofilin 1A	7.15	7.44

Smarce1	7.14	7.16
Smarcd2	7.01	7.02
SWI/SNF related matrix associated actin dependent regulator of chromatin subfamily c member 2	7.01	7.02
MICAL-like 2	7.00	7.00
MGC131041	6.88	7.14
Rho GTPase activating protein 1	6.81	6.97
Vasp	6.81	6.90
Cofilin 1B	6.8	7.30
Smarcd1	6.76	6.64
Actin-related protein 2/3 complex subunit 1b	6.75	6.91
actin related protein 2/3 complex. subunit 1B	6.75	6.91
SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily A-like protein 1	6.67	6.45
WASP	6.55	6.69
Actin-binding LIM protein 2	6.37	6.65
WD repeat-containing protein 1-A	5.92	6.55
actin related protein 2/3 complex. subunit 3	5.85	5.60
Rho GTPase activating protein 21	5.81	5.64
Profilin	5.50	5.72
TRIO and F-actin binding protein	5.35	5.51
Rho GTPase activating protein 5	5.16	5.15
WD repeat-containing protein 1-B	5.01	5.56
Rho-associated kinase alpha	4.91	5.39
Rho GDP-dissociation inhibitor 2	4.88	6.03
ARP8 actin-related protein 8 homolog	4.85	5.14
Afadin- and alpha-actinin-binding protein	4.83	5.24
SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related	4.81	4.94
Actin-related protein 10 homolog	4.72	4.97
Coronin 2B	4.70	5.19
Rho GTPase activating protein 35	4.68	4.75
Anillin	4.40	5.16
Rho GTPase activating proteins 18	0	4.73

CNN3	0	5.25

Appendix Table S2

Gene names	Fasta headers	No of peptides	
		Ctl	CDK-inh
diaph1	F6UXX7_XENTR Uncharacterized protein OS=Xenopus tropicalis	4	4
diaph3	F6VAH9_XENTR Uncharacterized protein (Fragment) OS=Xenopus tropicalis	3	3
fmn2	F6UL32_XENTR Uncharacterized protein OS=Xenopus tropicalis	2	3