

Materials List for

Nuclear Transport Assays in Permeabilized Mouse Cortical Neurons

Lindsey R. Hayes¹, Lauren Duan¹, Svetlana Vidensky¹, Petr Kalab²

¹Department of Neurology, Johns Hopkins School of Medicine ²Whiting School of Engineering, Johns Hopkins University

Corresponding Author

Lindsey R. Hayes

lhayes@jhmi.edu

Citation

Hayes, L.R., Duan, L., Vidensky, S., Kalab, P. Nuclear Transport Assays in Permeabilized Mouse Cortical Neurons. *J. Vis. Exp.* (173), e62710, doi:10.3791/62710 (2021).

Date Published

July 9, 2021

DOI

10.3791/62710

URL

jove.com/video/62710

Materials

Name	Company	Catalog Number	Comments
1 M HEPES	Gibco	15630-080	
10x HBSS	Gibco	14185-052	
32% paraformaldehyde	Electron Microscopy Sciences	15714-S	
96-well optical glass plates	CellVis	P96-1.5H-N	
ATP lithium salt	Millipore Sigma	11140965001	
B27	Gibco	17504-044	
Bio-Rad Protein Assay Kit II	Bio-Rad	5000002	
BL21(DE3) E. coli	NEB	C2527H	
Bovine serum albumin fraction V, heat shock, fatty acid free	Sigma-Aldrich	3117057001	
Chromatography columns	Bio-Rad	7311550	
Creatine kinase	Millipore Sigma	10127566001	
Creatine phosphate	Millipore Sigma	10621722001	
Dextran, Texas Red, 70,000 MW	Thermo Fisher	D1864	
DNase I	Sigma-Aldrich	DN25	
E15-16 timed pregnant C57BL/6J female mice	Jackson Laboratory	000664	
Excel	Microsoft	N/A	
Fetal bovine serum	Hyclone	SH30070.03	
Glutamax	Gibco	35050-061	
Glycerol	Thermo Fisher	15514011	
GTP lithium salt	Millipore Sigma	11140957001	
HALT protease inhibitor (100x)	Thermo Fisher	78439	
HEK293T cells	ATCC	CRL-3216	
HIS-Select HF Nickel affinity gel	Sigma-Aldrich	HO537	
Hoechst 33342	Thermo Fisher	H1399	
ImageExpress Micro Confocal High-content Imaging System	Molecular Devices	N/A	Used for time-lapse imaging
Imidazole	Millipore	I3386	

Importazole	Sigma-Aldrich	SML0341	
IPTG	Corning	46-102-RF	
Laminin	Sigma-Aldrich	L2020	
LB broth	Grainger	31FZ62	
LSM800 confocal microscope	Zeiss	N/A	Used for dextran imaging
MetaXpress High Content Image Analysis Software	Molecular Devices	N/A	
Neurobasal medium	Gibco	21103	
Papain	Worthington	LS003126	
Penicillin-streptomycin	Gibco	15140-122	
Poly-D-Lysine	Sigma-Aldrich	P6407	
Protease inhibitor cocktail	Millipore Sigma	11873580001	
Rango Plasmid (pRSET Rango2/a1 + linkers)	N/A	N/A	pK44, containing N-terminal 6-His tag
SOC (super optimal broth with catabolite repression) media	Quality Biological	340-031-671	
Sodium pyruvate	Gibco	11360-070	
Spin-X UF concentrators (30K MWCO)	Corning	CLS431484	
Trypsin-EDTA (0.05%)	Gibco	25300054	