

Materials List for

# An *In Vitro* Single-Molecule Imaging Assay for the Analysis of Cap-Dependent Translation Kinetics

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## Citation

Gaba, A., Wang, H., Qu, X. An *In Vitro* Single-Molecule Imaging Assay for the Analysis of Cap-Dependent Translation Kinetics. *J. Vis. Exp.* (), e61648, doi:10.3791/61648 (2020).

## Date Published

September 15, 2020

## DOI

10.3791/61648

## URL

jove.com/video/61648

## Materials

Name	Company	Catalog Number	Comments
100X oil objective, N.A. 1.49	Olympus	UAPON 100XOTIRF	
Acryamide/bis (40%, 19:1)	Bio-Rad	161-0144	
Alkaline liquid detergent	Decon	5332	
Aminosilane (N-(2-Aminoethyl)-3-Aminopropyltrimethoxysilane)	UCT Specialties, LLC	A0700	
Andor ixon Ultra DU 897V EMCCD	Andor	DU-897U-CSO-#BV	
Andor Solis software	Andor		For controlling the Andor EMCCD
Band-pass filter	Chroma	532/640/25	
Band-pass filter	Chroma	NF03-405/488/532/635E-25	
Biotin-PEG-SVA	Laysan Bio Inc	Biotin-PEG-SVA	
Coenzyme A free acid	Prolume	309-250	
Coolterm software			For controlling the syringe pump
Desktop computer	Dell		For controlling the microscope, camera, stage, and pump.
Dichroic mirror	Semrock	R405/488/532/635	
Direct-zol RNA microprep 50RNX	Fisher Scientific	NC1139450	
Dual-Luciferase Reporter Assay System	Promega	E1910	
Epoxy	Devcon	14250	
Firefly luciferin D-Luciferin free acid	Prolume	306-250	
Glacial acetic acid	Fisher Scientific	BP1185500	
Hydrogen peroxide	Sigma-Aldrich	216763-500ML	
Immersion oil	Olympus	Z-81226A	Low auto-fluorescence
Luciferase Assay System	Promega	E1500	
MEGASCRIP T7 Transcription Kit	Thermo fisher	AM1334	
Methanol	Fisher Scientific	MMX04751	
Microscope	Olympus	IX83	
Microscope slide	Thermo Scientific	3048	

Monoclonal anti-FLAG M2-Cy3	Sigma-Aldrich	A9594	
mPEG-SVA	Laysan Bio Inc	mPEG-SVA-5000	
MS(PEG)4	Thermo Scientific	22341	
NaCl (5M)	Thermo Scientific	AM9760G	
No 1.5 microscope Cover glass	Fisherband	12-544-C	
Olympus Laser, 532nm 100mM	Olympus digital Laser system	CMR-LAS 532nm 100mW	
Olympus TirfCtrl software	Olympus		For controlling the laser intensity and incident angle
Optical table	TMC vibration control	63-563	With vibration isolation
Phenol chloroform isoamyl alcohol mix	Sigma-Aldrich	77617-100ml	
Pierce RNA 3' End Biotinylation Kit	Thermo Scientific	20160	
Potassium hydroxide pellets	Sigma-Aldrich	P1767-500G	
Prior motorized XY translation stage	Prior	PS3J100	
Prior PriorTest software	Prior		For controlling the Prior motorized stage
Recombinant RNasin RNase Inhibitor	Promega	N2515	
Stage top Incubator	In vivo scientific (world precision Instruments)	98710-1	With a custom built acrylic cage
Staining jar	Fisher Scientific	08-817	
Streptavidin	Thermo Scientific	43-4301	
Sulfuric acid	Fisher Scientific	A300212	
SYBR green II	Fisher Scientific	S7564	
Syringe	Hamilton	1725RN	
Syringe pump	Harvard apparatus	55-3333	
Tris (1M), pH = 7.0	Thermo Scientific	AM9850G	
Ultrasonic Bath	Branson	CPX1800H	
Urea	Sigma-Aldrich	U5378-500G	
Vaccinia Capping system	New England Biolabs	M2080S	
Zymo-Spin IC Columns	Zymo Research	C1004	