

Rapid Characterization of Genetic Parts with Cell-free Systems

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Citation

McManus, J.B., Bernhards, C.B., Sharpes, C.E., Garcia, D.C., Cole, S.D., Murray, R.M., Emanuel, P.A., Lux, M.W. Rapid Characterization of Genetic Parts with Cell-free Systems. *J. Vis. Exp.* (174), e62816, doi:10.3791/62816 (2021).

Date Published

August 30, 2021

DOI

10.3791/62816

URL

jove.com/video/62816

Materials

Name	Company	Catalog Number	Comments
2x YT medium	Sigma-Aldrich	Y2377-250G	Alternative to making 2xYT media
Agar	Bacto	214010	For plating cells
Chromatography column (5 cm diameter)	BIO-RAD	731-1550	Used for protein purification.
Destination plate	Thermo Scientific Nunc plate	142761	For CFPS reactions
DMSO	Sigma-Aldrich	D2650	For dialysis buffer
DpnI	NEB	R0176L	For digestion of plasmid templates
DTT	Roche	20871723	S30 Buffer B
E. coli BL21(DE3) Rosetta2	Novagen	70954	Cell line used for production of lysate and purified proteins
Echo acoustic liquid handler	Labcyte	525	Acoustic liquid handler
French pressure cell	Thermo Spectronic	FA-078	For lysing cells for CFPS
Imidazole	Sigma-Aldrich	56750	For buffers
Impermeable plastic sealable lid	Thermo	232702	Plate seal
IPTG	RPI	I56000-25.0	Used for protein induction.
K-Glu	Sigma-Aldrich	g1501-500G	S30 Buffer B
Labcyte Echo source plate	Labcyte	PL-05525	For use with Echo acoustic liquid handler
Mg-Glu	Sigma-Aldrich	49605-250G	S30 Buffer B
NaCl	Sigma-Aldrich	S7653-250G	For buffers
NaHPO4	Sigma-Aldrich	71505	For dialysis buffer
NaOH	Mallinckrodt Chemicals	7708-10	For making 2xYT media. Currently not produced by Mallinckrodt. Alternate: Sigma-Aldrich S0899
Ni-NTA resin	Invitrogen	R901-15	For production of purified proteins
PCR H2O	Ambion	AM9937	PCR of linear templates
Plate Reader	BioTek	H10	Plate reader used

Q5 PCR Master Mix	NEB	M0494S	PCR of linear templates
QIAquick Gel Extraction Kit	Qiagen	28606	PCR of linear templates
QIAquick PCR Purification Kit	Qiagen	28004	PCR of linear templates
QSonica Ultrasonic Processor	Qsonica	Q700	Cell disruption during protein purification
RTS Amino Acid Sampler	biotechrabbit	BR1401801	Updated supplier from Sun et al.
Tris	MP	819623	S30 Buffer B
Tris-Cl	Sigma-Aldrich	T5941	For buffers
Tryptone	Fluka	T7293	For making 2xYT media
Yeast Extract	Bacto	212750	For making 2xYT media