

Materials List for:

Efficient Purification and LC-MS/MS-based Assay Development for Ten-Eleven Translocation-2 5-Methylcytosine Dioxygenase

Chayan Bhattacharya^{*1}, Aninda Sundar Dey^{*1}, Navid J. Ayon^{*1}, William G. Gutheil¹, Mridul Mukherji¹

¹Division of Pharmaceutical Sciences, School of Pharmacy, University of Missouri-Kansas City

*These authors contributed equally

Correspondence to: Mridul Mukherji at mukherjim@umkc.edu

URL: <https://www.jove.com/video/57798>

DOI: [doi:10.3791/57798](https://doi.org/10.3791/57798)

Materials

Name	Company	Catalog Number	Comments
HEPES	Carbosynth	FH31182	
Iron(II) sulfate heptahydrate	Sigma-Aldrich	F8633	
α-Ketoglutaric acid (2-Oxoglutaric acid)	Sigma-Aldrich	K1750	
L-Ascorbic acid	Sigma-Aldrich	A4544	
Ethylenediaminetetraacetic acid disodium salt dihydrate	Sigma-Aldrich	E5134	
Ammonium acetate	Sigma-Aldrich	A1542	
Acetonitrile	Fisher Scientific	75-05-8	
HPLC grade water	Fisher Scientific	7732-18-5	
Oligo clean and concentrator	Zymo Research	D4061	
DNAse I	New England Biolabs	M0303S	
S1 Nuclease	Thermo Scientific	ENO321	
CIAP (Calf intestinal alkaline phosphatase)	New England Biolabs	M0290S	
LB Media	Affymetrix	J75852	
IPTG	Carbosynth	EI05931	
MES [2-(N-Morpholino)ethanesulfonic acid monohydrate]	Carbosynth	FM37015	
Sodium chloride	Fisher Scientific	7647-14-5	
Glycerol	Sigma-Aldrich	G7893	
SP Sepharose	Fisher Scientific	45-002-934	
2'-Deoxy-5-methylcytidine	TCI	D3610	
2'-Deoxy-5-hydroxymethylcytidine	TCI	D4220	
2'-Deoxycytidine-5-carboxylic acid, sodium salt	Berry & Associates	PY 7593	
5-Formyl-2'-deoxycytidine	Berry & Associates	PY 7589	
2'-Deoxycytidine	Berry & Associates	PY 7216	
2'-Deoxyadenosine	Carbosynth	ND04011	
2'-Deoxyguanosine	Carbosynth	ND06306	
2'-Deoxythymidine	VWR Life Science	97061-764	
Gateway technology	Thermo Fisher	11801016	
Beckman Allegra X-15R centrifuge	Beckman Coulter	392932	
Sonic Dismembrator 550	Fisher Scientific	XL2020	

ÅKTA FPLC system	Pharmacia (GE Healthcare)	18116468	
FreeZone 4.5 freeze dry system	Labconco	7750020	
Zymo Oligo purification columns	Zymo Research	D4061	
BDS Hypersil C18 column	Keystone Scientific, INC	105-46-3	
3200 Q-Trap mass spectrometer	AB Sciex		
HPLC	Shimadzu HPLC		
XK16/20 FPLC column	Pharmacia (GE Healthcare)	28988937	