

Materials List for:

In Vitro Transcription Assays and Their Application in Drug Discovery

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Materials

Name	Company	Catalog Number	Comments
Obtain the proteins required for transcription assay			
<i>E. coli</i> RNAP	Epicentre	S90250	
Preparation of DEPC-treated water			
diethyl pyrocarbonate (DEPC)	Sigma-Aldrich	D5758	
RNase-free water			
Ambion Nuclease-Free Water	ThermoFisher	AM9937	
DNA template preparation			
Wizard Plus SV Minipreps DNA Purification System	Promega	A1330	
ACCUZYME Mix	Bioline	BIO-25028	
PCR primers			
Wizard SV Gel and PCR Clean-Up System	Promega	A9281	
NanoDrop 3300 fluorospectrometer	Thermo Scientific	ND-3300	
NTP Preparation			
ATP	Sigma-Aldrich	A6559	
UTP	Sigma-Aldrich	U1006	
GTP	Sigma-Aldrich	G3776	
CTP	Sigma-Aldrich	C9274	
High Purity rNTPs	GE Healthcare	27-2025-01	
α - ³² P UTP	PerkinElmer	BLU007C001MC	Radioactive compound
RNA ladder preparation			
Novagen Perfect RNA Marker Template Mix 0.1–1 kb	Millipore	69003	
HEPES	Sigma-Aldrich	H7006	
Sodium chloride	Sigma-Aldrich	S7653	
Magnesium chloride	Sigma-Aldrich	M8266	
DTT	Sigma-Aldrich	DTT-RO	
T7 RNAP	Promega	P2075	
Gel preparation			
Sequi-Gen GT nucleic acid sequencing cell	Bio-Rad	165-3804	
Sigmacote	Sigma-Aldrich	SL2	
urea	Sigma-Aldrich	U6504	
tris(hydroxymethyl)aminomethane	Sigma-Aldrich	154563	

boric acid	Sigma-Aldrich	B7901	
ethylenediaminetetraacetic acid	Sigma-Aldrich	ED	
40% Acrylamide/bis-acrylamide	Sigma-Aldrich	A9926	
ammonium persulfate	Sigma-Aldrich	A3678	
<i>N,N,N',N'</i> - Tetramethylethylenediamine (TEMED)	Sigma-Aldrich	T9281	
Transcription Assay			
Potassium chloride	Sigma-Aldrich	P9541	
glycerol	Sigma-Aldrich	G5516	
rifampicin	Sigma-Aldrich	R3501	
formamide	Sigma-Aldrich	F9037	
bromophenol blue	Sigma-Aldrich	B0126	
xylene cyanol	Sigma-Aldrich	X4126	
heparin	Sigma-Aldrich	84020	
RNasin Ribonuclease Inhibitor	Promega	N2511	
Transcription buffer			
Tris base	Sigma-Aldrich	T1503	
Potassium chloride	Sigma-Aldrich	P9541	
Magnesium chloride	Sigma-Aldrich	M2393	
DTT	Sigma-Aldrich	DTT-RO	
glycerol	Sigma-Aldrich	G5516	
Filter paper			
Whatman 3MM Chr Chromatography Paper	Fisher Scientific	05-714-5	
Radioactive decontaminant			
Decon 90	decon	decon90	
Gel Treatment			
Typhoon Trio+ imager	GE Healthcare Life Sciences	63-0055-89	