

Materials List for:

Transcriptome Analysis of Single Cells

Jacqueline Morris^{*1}, Jennifer M. Singh^{*1}, James H. Eberwine^{1,2}

¹Department of Pharmacology, University of Pennsylvania

²The Penn Genome Frontiers Institute, University of Pennsylvania

*These authors contributed equally

Correspondence to: James H. Eberwine at eberwine@upenn.edu

URL: <https://www.jove.com/video/2634>

DOI: [doi:10.3791/2634](https://doi.org/10.3791/2634)

Materials

Name	Company	Catalog Number	Comments
Spiegelgas coverslips	Carolina Biological	63-3029	
Nunc 35x10 mm culture dishes	Fisher Scientific	12-565-90	
Water for cell culture	Lonza Inc.	17-724Q	For making solutions used for cell culture and rinsing coverslips
Poly-D-Lysine MW70-150K	Sigma-Aldrich	6407	
Laminin, ultrapure	BD Biosciences	354239	
Boric acid	Sigma-Aldrich	B0252	
MEM with Earle's salts and glutamax	Invitrogen	41090-101	For plating cells
D-glucose	Sigma-Aldrich	G8769	
Penicillin-streptomycin	Invitrogen	15140-122	
Horse serum	Invitrogen	16050	
Cytosine beta-D-arabinofuranoside	Sigma-Aldrich	C1768	
MEM with Earle's salts and L-glutamine	Invitrogen	11095-098	For growing cells
Sodium pyruvate	Sigma-Aldrich	P2256	
B27 serum-free supplement	Invitrogen	17504-044	
Borosilicate glass capillary tubes (1.5mm O.D, 100mm length)	Kimble Chase	34500 99	Any borosilicate glass pipette will work as long as the proper bore size is attained.
HBSS	Invitrogen	14175	Any solution will work as long as the components won't interfere with any future processing (i.e. no Ca ²⁺ or Mg ²⁺)
1ml syringe	BD Biosciences	309628	
Needle	BD Biosciences		Gauge depends on the diameter of the pipettes
dNTP mix	Amersham	28-4065-51	
dt-T7 oligo	Custom	Midland Certified	
Second strand buffer (5x)	Invitrogen	Y01129	
DTT			Supplied with second strand buffer
E.coli DNA Ligase	Invitrogen	100002324	
DNA polymerase I	Invitrogen	100004926	
Rnase H	Invitrogen	18021-071	
Megascript T7 kit	Ambion	AM1334	
Random primers	BMB	11034731001	

Superscript III Reverse Transcriptase	Invitrogen	56575	in kit (18080-044) comes with first strand buffer (Y02321) and DTT
MEGAclear Kit	Ambion	1908	
MinElute Reaction Cleanup Kit	Qiagen	28206	
T4 DNA polymerase	Invitrogen	100004994	
Rnasin	Promega Corp.	N251B	
Illumina TotalPrep RNA Amplification Kit	Ambion	AMIL1791	
Flaming/Brown micropipette puller	Sutter Instrument Co.	P-87	Sutter has many other models, many are discussed in the cookbook
Micromanipulator	Olympus Corporation		Many other micromanipulators will work such as the newer Eppendorf models
Pipette Holder	Warner Instruments	MP-S15A	Will vary with micromanipulator and pipette O.D.
Bioanalyzer RNA 6000 Nano Kit	Agilent Technologies	5067-1511	