

Materials List for

# Tracking miRNA Release into Extracellular Vesicles using Flow Cytometry

Humna Hasan<sup>1</sup>, Andrea L. Kasinski<sup>1,2</sup>

<sup>1</sup>Department of Biological Sciences, Purdue University <sup>2</sup>Purdue Institute for Cancer Research, Purdue University

## Corresponding Author

Andrea L. Kasinski  
akasinski@purdue.edu

## Citation

Hasan, H., Kasinski, A.L. Tracking miRNA Release into Extracellular Vesicles using Flow Cytometry. *J. Vis. Exp.* (200), e65759, doi:10.3791/65759 (2023).

## Date Published

October 6, 2023

## DOI

10.3791/65759

## URL

jove.com/video/65759

## Materials

Name	Company	Catalog Number	Comments
1.5 mL microcentrifuge tubes	Fisher	05-408-129	
15 mL Falcon tubes	Corning	352097	
6-well clear flat bottom surface treated tissue culture plates	Fisher Scientific	FB012927	
ApogeeMix 25 mL, (PS80/110/500 & Si180/240/300/590/880/1300 nm)	Apogee Flow Systems	1527	To set up gating and parameters for particle detection
Attune Nxt Flow Cytometer	ThermoFisher Scientific	N/A	For fluorescence analysis in EVs
BD Fortessa Cell Analyzer	BD Biosciences	N/A	For fluorescence analysis in cells
Cell culture incubator	N/A	N/A	Maintaining temperature of 37 °C and 5% CO <sub>2</sub>
Cell Culture medium	N/A	N/A	specific for the cell-line of interest
Cell line of interest	N/A	N/A	Any cell line tested and evaluated for EV and cellular abundance of miRNAs on interest.
Cell-miRNA (miRIDIAN microRNA Mimic Red Transfection Control)	Horizon discovery	CP-004500-01-05	miRNAs predetermined to be retained by the cell-line of interest and not selectively exported out into EVs
EV-miRNA (Fluorophore conjugated miRNAs)	Integrated DNA Technologies (IDT)		miRNAs predetermined to be selectively sorted into EVs
Fluorescence microscope	N/A	N/A	
Gibco Opti-MEM Reduced Serum Medium	Fisher Scientific	31-985-070	
Hausser Scientific Hemocytometer	Fisher	02-671-54	
Hyclone 1x PBS (for cell culture)	Fisher	SH30256FS	
Lipofectamine RNAimax	Fisher Scientific	13-778-150	
miRCURY LNA Reverse Transcriptase	Qiagen	339340	
miRCURY LNA SYBR Green PCR	Qiagen	339347	
mirVana RNA Isolation	Qiagen	AM1561	
Nuclease free water	Fisher Scientific	4387936	
Paraformaldehyde, 4% in PBS	Fisher	AAJ61899AK	

Reagent reservoir nonsterile	VWR	89094-684	
Thermo ABI QuantiStudio DX Real-Time PCR	ThermoFisher Scientific	N/A	
Trypsin 0.25%	Fisher	SH3004201	
Ultracentrifuge	N/A	N/A	