

Materials List for:

# Engineering Intracellular Protein Sensors in Mammalian Cells

Marina Duhkinova<sup>1</sup>, Claudia Crina<sup>1</sup>, Ron Weiss<sup>2</sup>, Velia Siciliano<sup>1</sup>

<sup>1</sup>Istituto Italiano di Tecnologia

<sup>2</sup>Synthetic Biology Center, Department of Biological Engineering, Massachusetts Institute of Technology

Correspondence to: Velia Siciliano at [velia.siciliano@iit.it](mailto:velia.siciliano@iit.it)

URL: <https://www.jove.com/video/60878>

DOI: [doi:10.3791/60878](https://doi.org/10.3791/60878)

## Materials

Name	Company	Catalog Number	Comments
AlexaFluor 647 mouse anti-human HLA-A, B, C antibody clone W6/32	Biolegend	311414	Antibodies
Annexin V	LifeTechnologies	A35122	Apoptosis marker
Attractene	Qiagen	301005	Transfection reagent
BD Falcon Round-Bottom Tubes	BD Biosciences	352053	FACS tubes
Doxycycline	Clonotech	-	Cell Culture: Drugs
Dulbecco's modified Eagle medium	Cellgro	10-013-CM	Cell Culture: Medium
Evos Cell Imaging System	Life Technology	EVOS M5000	Imaging systems; Infectious molecular clones
FACSDiva8 software	BD Biosciences	659523	FACS software
Fast SYBR Green Master Mix	ThermoFisher Scientific	4385612	qPCR reaction
FBS (Fetal Bovin Serum)	Atlanta BIO	S11050	Cell Culture: Medium
Gateway System	Life Technologies	-	Plasmid Construction
Golden Gate System	in-house	-	Plasmid Construction
HEK 293FT	Invitrogen	R70007	Cell Culture: Cells
Infusion Cloning System	Clonotech	638920	Plasmid Construction
JetPRIME reagent	Polyplus transfection	114-15	Transfection reagent
Jurkat Cells	ATCC	TIB-152	Cell Culture: Cells
L-Glutamine	Sigma-Aldrich	G7513-100ML	Cell Culture: Medium
Lipofectamine LTX with Plus Reagent	Thermo Fisher Scientific	15338030	Transfection reagent
LSR Fortessa flow cytometer (405, 488, and 561 nm lasers)	BD Biosciences	649225	Flow cytometer
MicroAmp Fast Optical 96-Well Reaction Plate (0.1 mL)	ThermoFisher Scientific	4346907	qPCR reaction
Neon Transfection System	Life Technologies	MPK10025	Transfection reagent
Non-essential amino acids	HyClone	SH3023801	Cell Culture: Medium
Opti-MEM I reduced serum medium	Life Technologies	31985070	Transfection medium
Penicillin/Streptomycin	Sigma-Aldrich	P4458-100ML	Cell Culture: Medium
QuantiTect Reverse Transcription Kit	Qiagen	205313	Rev Transcriptase kit
RNeasy Mini Kit	Qiagen	74106	RNA extraction kit
RPMI-1640	ATCC	ATCC 302001	Cell Culture: Medium
Shield	Clonotech	632189	Cell Culture: Drugs
SpheroTech RCP-30-5-A beads	Spherotech	RCP-30- 5A-2	Compensation set up

---

StepOnePlus 7500 Fast machine	Applied Biosystems	4351106	qPCR reaction
-------------------------------	--------------------	---------	---------------