

Materials List for:

Open Source High Content Analysis Utilizing Automated Fluorescence Lifetime Imaging Microscopy

Frederik Görlitz^{*1}, Douglas J. Kelly^{*1}, Sean C. Warren¹, Dominic Alibhai², Lucien West³, Sunil Kumar¹, Yuriy Alexandrov¹, Ian Munro¹, Edwin Garcia¹, James McGinty¹, Clifford Talbot¹, Remigiusz A. Serwa⁴, Emmanuelle Thion⁴, Vincenzo da Paola³, Edward J. Murray⁵, Frank Stuhmeier⁶, Mark A. A. Neil¹, Edward W. Tate⁴, Christopher Dunsby^{1,7}, Paul M. W. French¹

¹Photonics Group, Department of Physics, Imperial College London

²Institute for Chemical Biology, Department of Chemistry, Imperial College London

³MRC Clinical Sciences Centre, Hammersmith Hospital

⁴Chemical Biology Section, Department of Chemistry, Imperial College London

⁵Retroscreen Virology Ltd

⁶Pfizer Global Research and Development, Pfizer Limited, Sandwich, Kent, UK

⁷Centre for Histopathology, Imperial College London

*These authors contributed equally

Correspondence to: Frederik Görlitz at f.gorlitz14@imperial.ac.uk

URL: <https://www.jove.com/video/55119>

DOI: [doi:10.3791/55119](https://doi.org/10.3791/55119)

Materials

Name	Company	Catalog Number	Comments
microscope frame	Olympus	IX81	http://www.olympusmicro.com/brochures/pdfs/ix71.pdf
optical autofocus	Olympus	ZDC	http://www.olympusmicro.com/brochures/pdfs/ix71.pdf
motorized (x-y-z) microscope stage	Marzhauser	00-24-565-0000	Stage with Corvus controle
excitation laser source	Fianium	SC400-4	Supercontinuum laser http://www.nktpotonics.com/product/sc400-4-compact-supercontinuum-laser/
gated optical intensifier	Kentech	High Rate Imager (HRI)	
delay generators	Kentech	---	See agile delay generator and precision delay generator
camera	Hamamatsu	ORCA-ER-II	
Nipkow disc scanner unit	Yokogawa	CSU-X1	http://www.yokogawa.com/solutions/products-platforms/life-science/confocal-scanner-unit-csu/csu-x1/
Top hat diffuser	Thorlabs	ED1-S20-MD	Engineered diffusers
mTq5V	Oxford Genetics	P3850	mTurquoise Venus construct with 5 amino acid linker
mTq17V	Oxford Genetics	P3847	mTurquoise Venus construct with 17 amino acid linker
mTq32V	Oxford Genetics	P3848	mTurquoise Venus construct with 32 amino acid linker
mTq5A	Oxford Genetics	P3849	mTurquoise Amber construct
HEK293T	---	---	cell type used
phenol red-free HBSS	Sigma Aldrich	55021C-1000ML	imaging media
culture media			DMEM + 10% FBS + 0.5% Antibiotics
DMEM	Sigma Aldrich	D6046-500ML	for culture media
FBS	Sigma Aldrich	12003C-500ML	for culture media

xTremeGene9	Sigma Aldrich	6.37E+09	for transfection, follow online protocol from La Roche
trypsin/EDTA Solution	Thermo Fischer	R001100	for detaching cells, follow online protocol from Thermo Fischer