Total Internal Reflection Fluorescence (TIRF) Microscope

Technical Specifications

- Leica AM TIRF MC (multi-colour) system attached to a Leica DMI 6000 inverted epifluorescence microscope with DIC available for some lenses.
- Automated rapid switching between laser lines (405, 488, 561nm, 635nm).
- Hamamatsu back-thinned EM-CCD camera (C9100-13).
- Can use automated or user-defined TIRF angles.
- The microscope has a (black) environmental control chamber allowing temperature control.
- Can be use for wide-field microscopy using either laser or lamp illumination (intensity attenuation available within software).
- Movement of data to O:drive and PPMS access enabled but no other network access. Only use USB devices after checking with us as virus-checking is not updated.

Lenses

Lens	Dry/ Oil	Phase contrast	Working distance (mm)	N/A	Features	Serial number	Pixel width at 1x binning in microns
20x HCX PL Fluotar	Dry	Yes	1.15	0.5		506506	1.143
63x HC PL APO CORR TIRF	Oil	No	0.1 – 0.22	1.47	TIRF lens, coverglass thickness correction, temperature correction	506319	0.363
100x HC PL APO CORR TIRF	Oil	No	0.1 – 0.22	1.47	TIRF lens, coverglass thickness correction, temperature correction	506318	0.229

Filter cubes

Position	Code	Fluorophore (examples)	Excitation filter	Dichroic mirror	Emission filter
CFP-T	CFP-T	CFP	BP 422/44	455	BP 480/40
RFP-T	RFP-T	RFP	BP 552/24	570	BP 605/65

GFP-T	GFP-T	GFP, YFP	BP 490/20	500	BP 525/50
VBG-T	VBG-T	Fast switching between CFP/GFP/YFP/RFP	422/44 490/20 552/24	435 505 550	465/45 545/55 610/65
QAP	QAP	Fast switching between CFP/GFP/YFP/RFP/Far red	422/44 490/20 552/24 635/10	435 505 550 660	450/50 525/36 600/32 705/72