Confocal SP8UV

Room: E1002 CBI

Inverted confocal microscope (Leica) dedicated to the conventional confocal imaging of fixed and living samples. Adaptative Focus Control option. No scan field rotation. Equipped with a climatic chamber (temperature control (RT to 37°C) only) and motorized x-y-z stages.

Excitation Lasers

Illumination	Wavelength range, nm	Application examples
Laser OPSL 355 nm	355	Photo-activation, uncaging, DNA lesions…
Laser diode 405 nm	405	Confocal fluorescence imaging
Argon laser	458 476 488 496 514	Confocal fluorescence imaging
DPSS Laser 561 nm	561	Confocal fluorescence imaging
HeNe Laser 633 nm	633	Confocal fluorescence imaging

Confocal Unit:
Standard scanner with variable speed from 10 to 1800 Hz
Resonant scanner option 8kHz

Objectives

Default objectives	Magnification	NA	Working distance	Immersion	coverglass	CORR
HC PL FLUOTAR	10	0.3	11	DRY	-	-
HC PL APO CS2	20	0.75	0.68	IMM	-	CORR
HCX PL APO CS	40	1.3	0.22	OIL	0.17	-
HC PL APO CS2	63	1.4	0.14	OIL	0.17	-
HC PL APO CS2	63	1.2	0.30	WATER	0.14-0.18	motCorr

Detection

Detection	Wavelength range, nm	Application examples
2 Internal (descanned) PMTs	350 to 800 nm, adjustable spectral range	Confocal fluorescence imaging, Confocal reflectance imaging…
2 Internal (descanned) HyDs	350 to 800 nm, adjustable spectral range	High sensitivity imaging of weak signals, Photon counting mode*
1 PMT trans	Laser wavelength	Transmission imaging

* please to check out the HyD operating instructions

Filter cubes for epifluorescence observation

Cube name	Excitation filter - Dichroic - Emission filter
A4	BP 360/40 400 BP 470/40
I3	BP 450 – 490 510 LP515
N2.1	BP 515-560 580 LP590
TXRD	BP 560/40 595 BP 645/75
L5	BP 480/40 505 BP 527/30

(note Elvire: on pourrait éventuellement créer un lien actif vers les courbes en transmission des filtres….)

Microscope
Inverted Leica DMI6000 microscope

Stages
X-Y motorized stage for multiposition recordings
Z galvo stage for fast z stack

Software:
Leica LAS AF software

- Acquisition modes: time lapse (xyt), z stack (xyz), spectral acquisitions (xyλ), Multiposition (Mark&Find), Overview Image (Tile Scan), Sequential acquisition
- Best Focus and Adaptative Focus Control, FRAP modality
- Processing tools for stitching, deconvolution, 3D visualization…

Temperature:
Environmental chamber for temperature control (Cube box system). No CO_2