Confocal SP8X

Room : E1002 CBI

Inverted confocal microscope (Leica) dedicated to the conventional confocal imaging of living samples. Adaptative Focus Control option. Equipped with an Okolab Stage Top Incubator (temperature control (from 3°C above ambient to 60°C), CO_2 and humidity control) and motorized x-y-z stages.

Excitation Lasers

Illumination	Wavelength range, nm	Application examples
Laser diode 405 nm	405	Confocal fluorescence imaging
Laser diode 442nm	442	Confocal fluorescence imaging
White Laser	470 to 670 nm	Confocal fluorescence imaging

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

Objectives

Default objectives	Magnification	NA	Working distance	Immersion	coverglass
HCX PL APO CS	10	0.4	2.2	DRY	0.17
HC PL APO CS2	20	0.75	0.62	DRY	0.17
HC PL APO CS	40	1.3	0.22	OIL	0.17
HC PL APO CS2	63	1.4	0.14	OIL	0.17

Detection

Detection	Wavelength range, nm	Application examples
3 Internal (descanned) PMTs	350 to 800 nm, adjustable spectral range	Confocal fluorescence imaging, Confocal reflectance imaging…
2 Internal (descanned) HyDs with gating option**	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

** time gated detection allows suppression of autofluorescence and reflected light

Filter cubes for epifluorescence observation

Cube name	Excitation filter	Dichroic	Emission filter
A4	BP 360/40	400	BP 470/40
CFP/YFP	BP 436/12 ;500/20	445;515	BP467/37;545/45
N2.1	BP 515-560	580	LP590
L5	BP 480/40	505	BP 527/30

Microscope
Inverted Leica DMI6000 microscope

Stages

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

Software:
Leica LAS-X software
- Acquisition modes: time lapse (xyt), z stack (xyz), spectral acquisitions (xyλ; xyΛ), Multiposition (Mark&Find), Overview Image (Tile Scan), Sequential acquisition
- Best Focus and Adaptative Focus Control

Temperature and CO_2:
Okolab Stage Top Incubator (temperature control from 3°C above ambient to 60°C, CO_2 and humidity control)