

Cellular Imaging

Research Administration
Seattle, WA • 501(c)(3) Nonprofit



Fred Hutch's Shared Resources are catalysts for lifesaving discoveries. This uniquely centralized program of 15 specialized core facilities and scientific services drives advances by integrating dedicated experts and cutting-edge technologies across the entire research pipeline, from basic science to clinical trial.

Nikon Live Widefield

Widefield inverted microscope

Excitation sources

- Spectra III LED, wavelengths (nm): 390, 440, 475, 510, 555, 575, 635, and 747
- White light LED

Objectives

- 10x/0.45 (air)
- 20x/0.45 (air) extra-long working distance
- 20x/0.75 (air)
- 40x/0.60 (air) extra-long working distance
- 60x/1.4 (oil)
- 100x/1.45 (oil)

Cameras

- Photometrics Prime BSI Express sCMOS, monochrome camera
- Nikon DS-Fi3 color camera

Capabilities

- Phase, polarization, and brightfield imaging
- Widefield 4-color fluorescence imaging
- Piezo stage for fast Z-stacks
- Multi-point and tile stitching acquisition
- Perfect focus system (PFS) to maintain axial focus position

Recommended uses

- Live cell imaging
- Fast volume imaging
- Colocalization studies
- Phase contrast imaging

General information

The Nikon Live microscope is a versatile inverted widefield microscope. It is suited for imaging living or fixed samples in a variety of formats, especially vessels containing media or buffer. It's extra-long working distance 20x and 40x objectives facilitate imaging through thicker bottomed vessels. It has a variety of excitation lines to excite the standard blue, green, red, and far-red fluorophores as well as cyan, yellow, and near infra-red. The Nikon Live contains a variety of emission filters to perform fast multi-color imaging or to minimize fluorophore crosstalk. In addition to a high-performance fluorescence imaging using a monochrome camera, the Nikon Live is additionally equipped with a color camera for imaging colormetric stains and dyes. The piezo stage facilitates fast and precise z movements. The Nikon microscope stand includes the Perfect Focus System (PFS), which keeps the specimen in focus over hours long time courses.

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Channel Excitation (nm)		Detection Range
365		435-485 nm
488		515-555 nm
561		573-648 nm
640		659-701 nm
Penta	365	420-460 nm
	488	510-531 nm
	561	589-623 nm
	640	677-711 nm
	730	768-849 nm
Triple	440	461-485 nm
	514	528-552 nm
	594	602-682 nm