

High-speed dual-channel laser TIRF imaging system

Model: Olympus IX73

Application: The system is widely used in cell membrane surface ligand / receptor binding, in vitro single molecule enzyme digestion reaction, single molecule detection and so on. can meet the requirements of many materials, such as single cell, single molecule imaging, chemical and biological fields, and the system includes three imaging methods: TIRF imaging, wide-field fluorescence imaging and transmission light imaging.

Laser wavelength :488 nm、561nm **Objective :**10 X、20X、40X、60X Oil immersion TIRF objective

Wide-field fluorescence channels: DAPI、GFP、RFP

Start sequence:

Camera — Laser — Computer — Software

Shutdown sequence:

Software — Computer — Laser — Camera

TIRF imaging:

- 1、After the objective lens is switched to 60 X oil immersion TIRF objective, Using the confocal dish, making the objective lens and the confocal dish are contacted by the focus.
- 2、Under Acquire window in the software, click on the show live for image preview.
- 3、Turn on the PE300lite, switch the lower fluorescent filter to the corresponding fluorescence channel, and the upper fluorescent filter turns to position 2. The clear focal surface of the sample was obtained by fine-tuning the focusing by microscope.
- 4、Turn off the PE300lite, switch the upper fluorescent filter to position 1, and the lower fluorescent to the empty position.
- 5、On the right side of the toolbar, click TIRF 488 or TIRF 561 for TIRF imaging.
- 6、Click on the Acquire.

Wide-field fluorescence imaging:

- 1、Select the appropriate magnification objective and place the sample.
- 2、Turn on the transmission light and adjust to the appropriate light intensity.
- 3、Under Acquire window in the software, click on the show live for image preview.
- 4、The upper and lower fluorescent filter is transferred to the empty position.
- 5、The focused sample was coarsely fine-tuned by microscope until a clear focal surface of the sample was obtained.
- 6、Turn on the PE300lite and switch the lower fluorescent filter to the corresponding fluorescence channel.
- 7、Click on the Acquire .

Transmission imaging:

- 1、Select the appropriate magnification objective and place the sample.
- 2、Turn on the transmission light and adjust to the appropriate light intensity.
- 3、Under Acquire window in the software, click on the show live for image preview.
- 4、The upper and lower fluorescent filter is transferred to empty position, Focusing the sample.
- 5、Click on the Acquire .