

See your cells in a whole new light

NovaFluor dyes for high-dimensional panel design

Get more use from your detectors and gain resolution

Invitrogen™ NovaFluor™ dyes are designed for greater data resolution due to their narrow emission spectra and minimal cross-laser excitation profiles. NovaFluor dyes have unique spectra, with decreased spillover into other dyes, resulting in higher resolution. Spectral overlap or spillover into multiple detectors may reduce the resolution of the fluorescence signal. NovaFluor dyes can aid in panel design because they have narrow laser excitation ranges (Figure 1) and emission profiles.

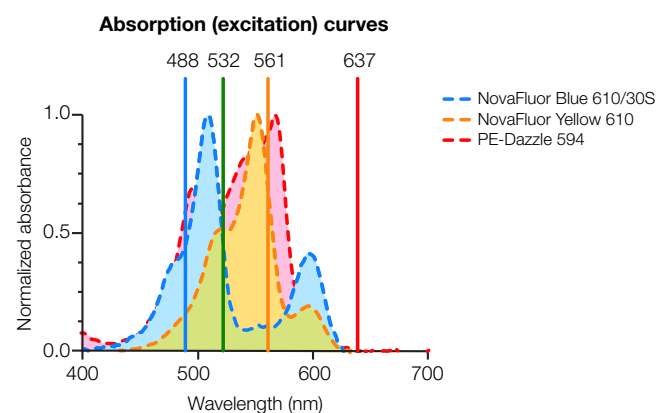


Figure 1. NovaFluor dyes have tighter excitation ranges than PE-Dazzle 594 dye. Normalized absorbance spectra of PE-Dazzle™ 594 (BioLegend), Invitrogen™ NovaFluor™ Blue 610/30S, and NovaFluor™ Yellow 610 dyes with blue (488 nm), green (532 nm), yellow (561 nm), and red (637 nm) laser lines overlaid. Excitation of PE-Dazzle 594 dye by the blue and yellow/green lasers leads to occupation of the detectors on both laser lines. Swapping PE-Dazzle dye with NovaFluor Blue 610/30S and NovaFluor Yellow 610 dyes will allow researchers to gain one additional marker.

Advantages of NovaFluor dyes

- Engineered to have narrow excitation and emission profiles to help gain detectors and fit additional markers
- Less spillover and low spectral spread for higher resolution of populations and easier panel construction
- Available with different levels of brightness to reduce spread for high-expression antigens
- Built using Phiton™ technology (Phitonex)—a DNA scaffold labeled with small-molecule fluorophores—that lends stability, NovaFluor dyes retain fluorescence intensity and spectral signature at long-term 4°C storage after staining and fixation

The Invitrogen™ CellBlox™ Blocking Buffer included in the kit is formulated to block nonspecific binding of NovaFluor dye labels to cells. These nonspecific interactions can result in higher background labeling. To minimize background labeling, CellBlox Blocking Buffer should be used in conjunction with a NovaFluor dye to label any cell type.

CellBlox Blocking Buffer is also recommended for use with cyanine-based dyes and tandem dyes to block nonspecific interactions with monocytes and macrophages, thereby minimizing background labeling.

Ordering information

Product	Cat. No.
Conjugation kits and buffer	
CellBlox Blocking Buffer	B001T02F01
NovaFluor Blue 530*	K06T04L002
NovaFluor Blue 610/30S*	K06T04L003
NovaFluor Blue 660/40S*	K06T04L004
NovaFluor Yellow 570*	K06T04L005
NovaFluor Yellow 610*	K06T04L006
NovaFluor Yellow 660*	K06T04L007
NovaFluor Blue 510*	K06T04L008
NovaFluor Blue 555*	K06T04L009
NovaFluor Yellow 585*	K06T04L010
NovaFluor Blue 610/70S*	K06T04L011
NovaFluor Yellow 660/120S*	K06T04L012
NovaFluor Yellow 590*	K06T04L013
NovaFluor Yellow 690*	K06T04L014
NovaFluor Yellow 700*	K06T04L015
NovaFluor Yellow 730*	K06T04L016
NovaFluor Red 660*	K06T04L017
NovaFluor Red 685*	K06T04L018
NovaFluor Red 700*	K06T04L019
NovaFluor Red 710*	K06T04L020

[Search online for NovaFluor dye-conjugated antibodies.](#)

Ordering information

Product	Cat. No.
Invitrogen™ NovaFluor™ CD4 label characterization kits	
Human CD4 kit (Clone SK3)	NovaFluor Blue 530, NovaFluor Blue 610/30S, NovaFluor Blue 660/40S, NovaFluor Yellow 570, NovaFluor Yellow 610, NovaFluor Yellow 660 K02T01L001
Human CD4 kit (Clone SK3)	NovaFluor Blue 510, NovaFluor Blue 555, NovaFluor Yellow 610/70S, NovaFluor Yellow 660/120S, NovaFluor Yellow 690, NovaFluor Yellow 700, NovaFluor Red 660, NovaFluor Red 685, NovaFluor Red 700 K04T01L022
Mouse CD4 kit (GK1.5)	NovaFluor Blue 530, NovaFluor Blue 610/30S, NovaFluor Blue 660/40S, NovaFluor Yellow 570, NovaFluor Yellow 610, NovaFluor Yellow 660 K03T01L001
Mouse CD4 kit (GK1.5)	NovaFluor Blue 510, NovaFluor Blue 555, NovaFluor Yellow 610/70S, NovaFluor Yellow 660/120S, NovaFluor Yellow 690, NovaFluor Yellow 700, NovaFluor Red 660, NovaFluor Red 685, NovaFluor Red 700 K05T01L022

Learn more at thermofisher.com/novafluor

invitrogen
Ordering information

Product	Cat. No.
Invitrogen™ LIVE/DEAD™ viability dyes	
LIVE/DEAD Fixable Blue Stain	L23105
LIVE/DEAD Fixable Violet Stain	L34955
LIVE/DEAD Fixable Aqua Stain	L34957
LIVE/DEAD Fixable Yellow Stain	L34959
LIVE/DEAD Fixable Green Stain	L23101
LIVE/DEAD Fixable Red Stain	L23102
LIVE/DEAD Fixable Far Red Stain	L10120
LIVE/DEAD Fixable Near-IR Stain	L10119
LIVE/DEAD Fixable Lime	L34990
LIVE/DEAD Fixable Olive	L34978
LIVE/DEAD Fixable Orange	L34984
LIVE/DEAD Fixable Scarlet	L34987
LIVE/DEAD Fixable Near IR (780)	L34993
LIVE/DEAD Fixable Near IR (876)	L34981

* Use amine-reactive dyes with panels that have NovaFluor dyes.

Our tech specialists are familiar with dyes and clones, so they can help you select dyes and build complex panels. [Contact us](#) to learn how to add NovaFluor dyes to your panels.