iFluor® 488 TCO

Catalog Number: 1005
Unit Size: 1 mg

Product Details

Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	12 months upon receiving

Chemical Properties

Appearance	Solid orange-red
Molecular Weight	945.16
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	491 nm
Emission Wavelength	516 nm

Applications

The tetrazine-trans-cyclooctene (TCO) ligation constitutes a non-toxic biomolecule labeling method of unparalleled speed. A tetrazine-functionalized molecule reacts with a TCO-functionalized molecule, forming a stable conjugate via a dihydropyrazine moiety. This has gained popularity due to its extremely fast kinetics. AAT Bioquest offers a group of tetrazine- and TCO-containing dyes for exploring various biological systems that can use this powerful click reaction. iFluor® 488-TCO can be readily used to label tetrazine-modified biological molecules for fluorescence imaging and other fluorescence-based biochemical analysis. The conjugates prepared with iFluor® 488 dyes are far superior to those of fluorescein derivatives such as FITC. iFluor® 488 conjugates are significantly brighter than fluorescein conjugates and are much more photostable. Additionally, the fluorescence of iFluor® 488 is not affected by pH (4-10). This pH insensitivity is a major improvement over fluorescein, which emits its maximum fluorescence only at pH above 9. iFluor® 488 has spectral properties similar to Alexa Fluor® 488. In some cases, it demonstrates brighter signals (Alexa Fluor® is the trademark of Invitrogen).