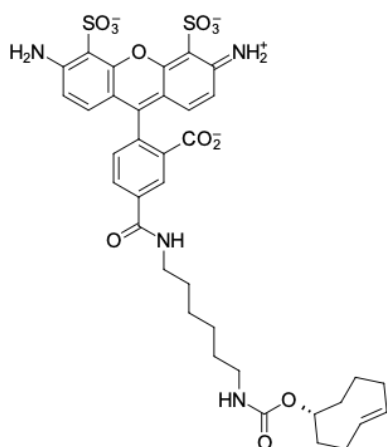


## AF 488 TCO

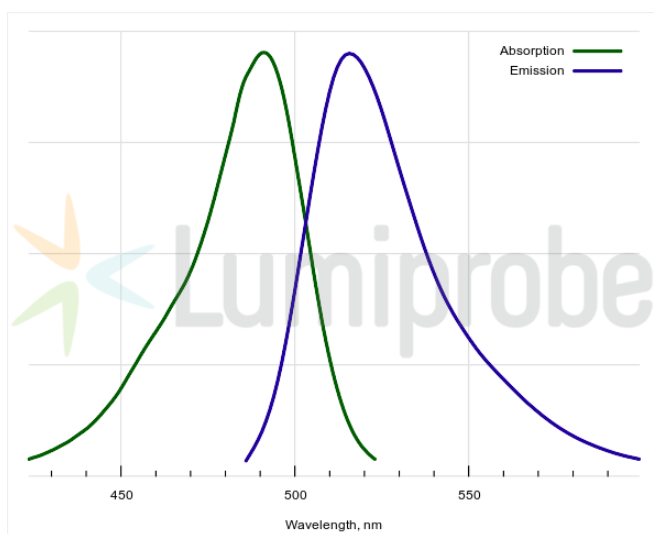
<http://www.lumiprobe.com/p/af-488-tco>

Trans-cyclooctene (TCO) is one of the most used cycloalkenes for bioconjugation tasks. TCO readily reacts with tetrazines via inverse electron-demand Diels-Alder cycloaddition (IEDDA). TCO-Tetrazine ligation possesses ultrafast kinetics, selectivity, and long-term aqueous stability, which is important in low-concentration applications such as protein-protein conjugations, etc.

This TCO is a AF 488-containing derivative. AF 488 is sulfonated rhodamine, a bright, photostable, and hydrophilic fluorophore that emits in the green channel. The absorption maximum is 495 nm. The emission maximum is 519 nm.



**Structure of AF 488 TCO**



**Absorption and emission spectra of AF 488**

### General properties

Appearance:	orange powder
Molecular weight:	989.27
Molecular formula:	$C_{48}H_{70}N_6O_{12}S_2$
Solubility:	good in water, DMSO; moderate in acetonitrile
Quality control:	NMR $^1H$ and HPLC-MS (95+%)
Storage conditions:	24 months after receipt at $-20^\circ C$ in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate. Avoid prolonged exposure to light.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.

### Spectral properties

Excitation/absorption maximum, nm:	495
$\epsilon$ , $L \cdot mol^{-1} \cdot cm^{-1}$ :	71800
Emission maximum, nm:	519
Fluorescence quantum yield:	0.91
$CF_{260}$ :	0.16
$CF_{280}$ :	0.10