

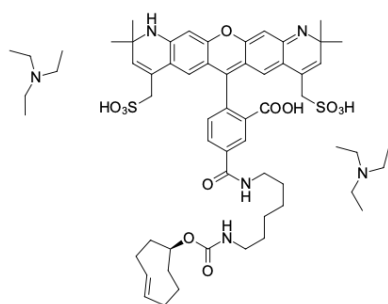
## AF 568 TCO

<http://www.lumiprobe.com/p/af568-tco-5>

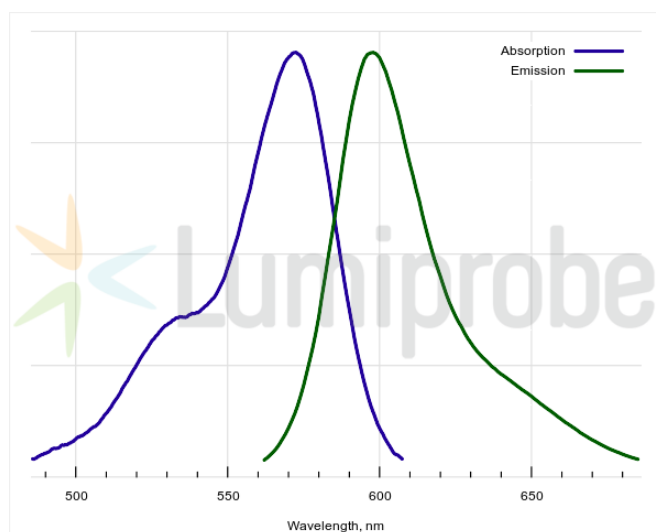
AF 568 TCO is a bright, photostable dye bearing a trans-cyclooctene (TCO) handle for rapid bioorthogonal labeling. It combines the excellent photophysical properties of the AF 568 fluorophore (orange—red emission, high quantum yield, and good photostability) with the fast and selective reactivity of the trans-cyclooctene group.

The TCO moiety undergoes ultrafast strain-promoted IEDDA ligation with tetrazine-functionalized targets, enabling rapid conjugation at low concentrations without copper catalysts and with minimal impact on biological systems.

The dye is well suited for fluorescence microscopy, multicolor imaging, and tracking of tetrazine-tagged proteins, nucleic acids, or small molecules, providing a bright signal with low background in biological samples.



**Structure of AF 568 TCO**



**Absorption and emission spectra of AF 568**

### General properties

Appearance:	deep-violet crystals
Molecular weight:	1147.51
Molecular formula:	$C_{60}H_{86}N_6O_{12}S_2$
Solubility:	DMSO, DMF, water
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:	572
$\epsilon$ , $L \cdot mol^{-1} \cdot cm^{-1}$ :	94238
Emission maximum, nm:	598
Fluorescence quantum yield:	0.912
$CF_{260}$ :	0.4
$CF_{280}$ :	0.32