

## Cyanine3 tetrazine

<http://www.lumiprobe.com/p/cy3-tetrazine>

Cyanine3 tetrazine is a fluorescent dye with tetrazine moiety for a conjugation reaction called TCO (trans-cyclooctene) ligation. Actually, tetrazines react not only with trans-cyclooctenes, but also with (methyl)cyclopropenes and strained non-benzo-fused cycloalkynes.

Cyanine3 is a moderately hydrophobic dye, enabling labeling in non-aqueous environment as well as in aqueous media containing some organic co-solvent like acetonitrile or DMSO. For reactions in purely aqueous media, a [sulfonated version](#) of this reagent is available.



### Structure of Cyanine3 tetrazine



### Absorption and emission spectra of Cyanine3

#### General properties

Appearance:	dark red solid
Mass spec M+ increment:	611.4
Molecular weight:	727.64
Molecular formula:	C <sub>40</sub> H <sub>46</sub> N <sub>7</sub> BF <sub>4</sub> O
Solubility:	good in DCM, DMSO, DMF
Quality control:	NMR <sup>1</sup> H, HPLC-MS (95%)
Storage conditions:	Storage: 24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. Desiccate.

#### Spectral properties

Excitation/absorption maximum, nm:	555
ε, L·mol <sup>-1</sup> ·cm <sup>-1</sup> :	150000
Emission maximum, nm:	570
Fluorescence quantum yield:	0.31
CF <sub>260</sub> :	0.04
CF <sub>280</sub> :	0.09