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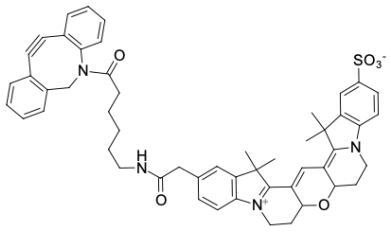
Cyanine3B DBCO

http://www.lumiprobe.com/p/cy3b-dbco

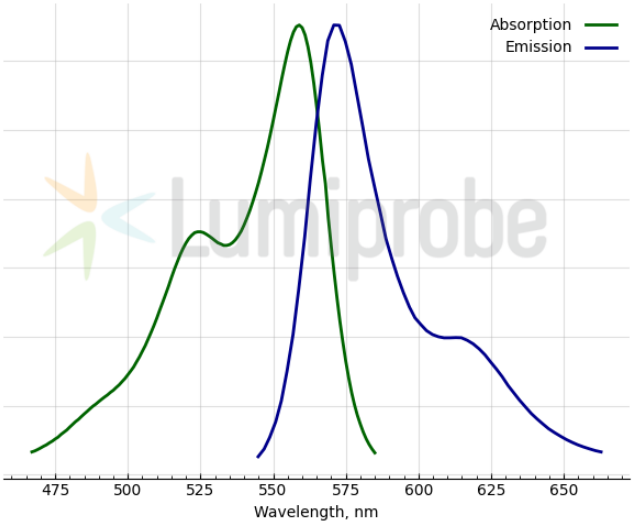
Dibenzocyclooctyne (DBCO, DBCO, ADIBO) is one of the most reactive cycloalkynes for copper-free click reaction (SPAAC, strain-promoted azide-alkyne cycloaddition). The rate of interaction of DBCO with azides is significantly higher than that of other cyclooctynes, as well as Cu-catalyzed click reaction (CuAAC). Unlike other cyclooctynes, DBCO does not interact with tetrazines, which makes it possible to use it in bioorthogonal reactions together with trans-cyclooctenes and tetrazines.

Cyanine3B is a yellow-emitting cyanine dye that is an improved version of the Cyanine3 fluorophore with significantly higher fluorescence quantum yield and photostability. Due to the fixed conformation, Cyanine3B has the highest emission quantum yield compared to other dyes of this wavelength.

This is a sulfonated dye and can be used for efficient labeling in water media.



Structure of Cyanine3B DBCO



Absorbance and emission spectra of Cyanine3B

General properties

Appearance:	dark red powder
Molecular weight:	861.08
Molecular formula:	$C_{52}H_{52}N_4O_6S$
Solubility:	soluble in methanol, ethanol, DMF, DMSO
Quality control:	NMR ^1H and HPLC-MS (90+%)
Storage conditions:	24 months after receival at -20°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:	559
ε, $L \cdot mol^{-1} \cdot cm^{-1}$:	121000
Emission maximum, nm:	571
Fluorescence quantum yield:	0.68
CF_{260}:	0.044

CF_{280}:	0.077