

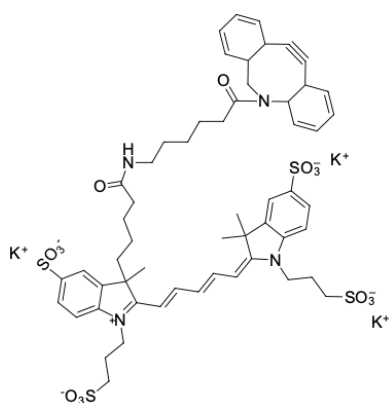
AF 647 DBCO

<http://www.lumiprobe.com/p/af-647-dbc>

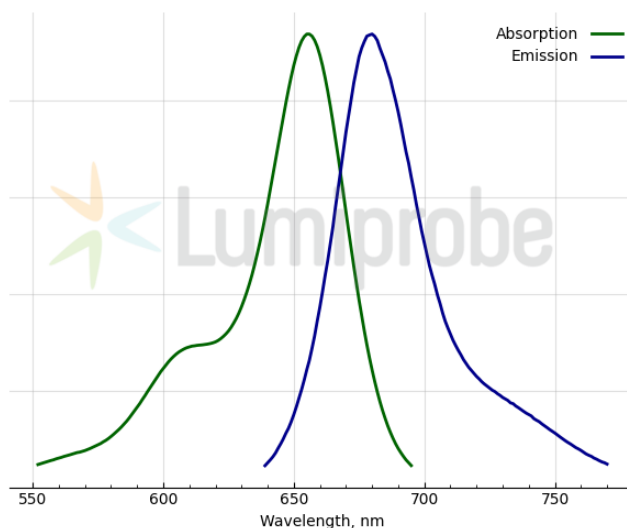
Dibenzocyclooctyne (DBCO, DBCO, ADIBO) is one of the most reactive cycloalkynes for copper-free click reaction (SPAAC, strain-promoted azide-alkyne cycloaddition). The rate of interaction of DBCO with azides is significantly higher than that of other cyclooctynes, as well as Cu-catalyzed click reaction (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.

AF 647 is a bright, far-red-emitting fluorescent dye with high fluorescence quantum yield and photostability. AF 647 is a water-soluble, pH-insensitive dye. The spectrum of AF 647 is far from the green-yellow wavelengths, which makes this fluorophore indispensable for the microscopy of tissues with high autofluorescence.

AF 647 DBCO allows fluorescent labeling of azide-containing biomolecules inside living cells, whole organisms, and inanimate samples.



Structure of AF 647 DBCO



Absorption and emission spectra of AF 647

General properties

Appearance:	deep-blue powder
Molecular weight:	1266.74
Molecular formula:	$C_{56}H_{68}K_3N_4O_{14}S_4$
Solubility:	water, DMSO, DMF, methanol
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.
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:	655
ϵ , $L \cdot mol^{-1} \cdot cm^{-1}$:	191800
Emission maximum, nm:	680
Fluorescence quantum yield:	0.15

CF_{260} :	0.09
CF_{280} :	0.08