

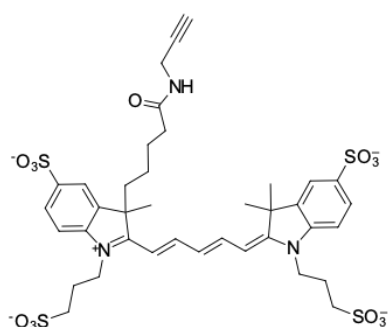
AF 647 alkyne

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

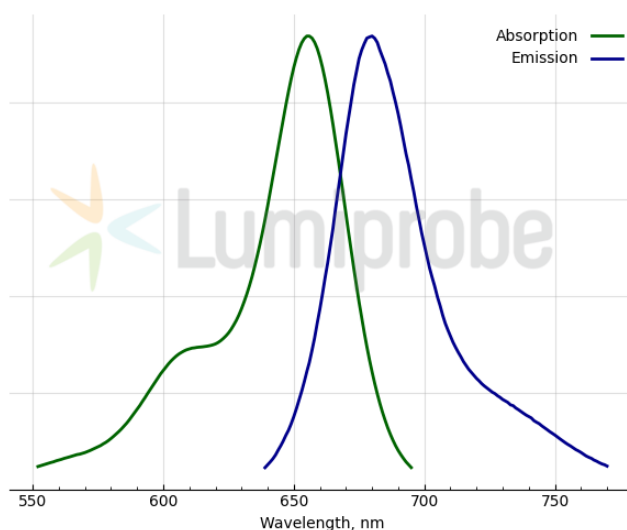
AF 647 alkyne is a bright, photostable far-red fluorescent dye functionalized with a terminal alkyne group for bioorthogonal conjugation. The alkyne moiety enables efficient labeling of azide-containing biomolecules via copper(I)-catalyzed azide-alkyne cycloaddition (CuAAC, click chemistry), providing high specificity and excellent reaction yields under mild conditions.

AF 647 alkyne exhibits strong absorption in the red region and intense fluorescence in the far-red region, making it well-suited for fluorescence microscopy, flow cytometry, and *in vivo* and *ex vivo* imaging. The far-red emission minimizes cellular autofluorescence and enables deep-tissue imaging as well as multiplex experiments with minimal spectral overlap.

The dye is highly water-soluble and resistant to photobleaching, ensuring stable signal intensity during prolonged imaging or repeated excitation. AF 647 alkyne is commonly used for post-labeling of azide-modified proteins, glycans, nucleic acids, lipids, and other biomolecules introduced through metabolic labeling or chemical modification.



Structure of AF 647 alkyne



Absorption and emission spectra of AF 647

General properties

Appearance:	deep-blue shiny powder
Molecular weight:	996.34
Molecular formula:	$C_{38}H_{44}K_3N_3O_{13}S_4$
Solubility:	Water, DMSO, DMF
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, <i>in vitro</i> 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

CF₂₆₀:

0.09

CF₂₈₀:

0.08