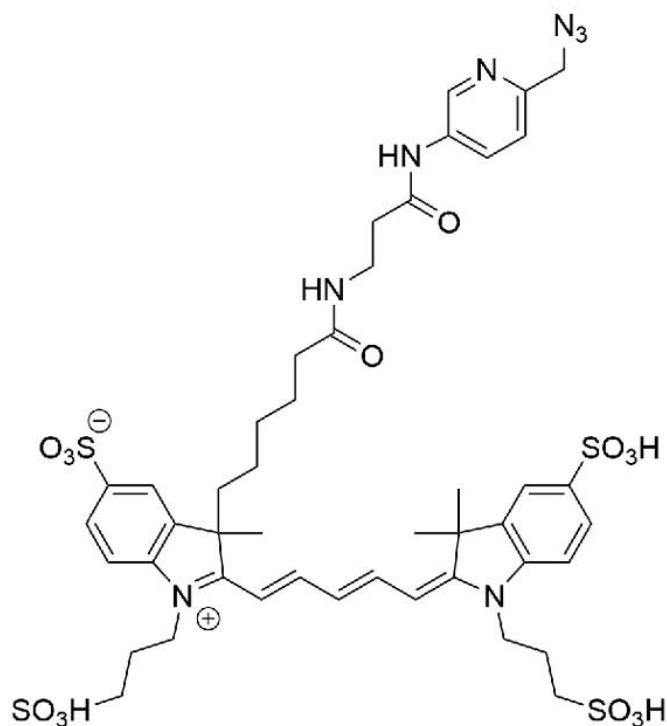




AZDYE 647 PICOLYL AZIDE

SKU: CCT-1300



DESCRIPTION

AZDye™ 647 Picolyl Azide is an advanced fluorescent probe that incorporates a copper-chelating motif to raise the effective concentration of Cu(I) at the reaction site to boost the efficiency of the CuAAC reaction, resulting in a faster and more biocompatible CuAAC labeling. Up to 40-fold increase of signal intensity, compared to conventional azides, was reported (see Selected References).

In addition, the use picolyl azides instead of conventional azides allows for at least a tenfold reduction in the concentration of the copper catalyst without sacrificing the efficiency of labeling, significantly improving biocompatibility of CuAAC labeling protocol.

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In summary, the introduction of a copper-chelating motif into azide probe leads to a substantial increase in the sensitivity and reduced cell toxicity of CuAAC detection alkyne-tagged biomolecules. This will be of special value for the detection of low abundance targets or living system imaging.

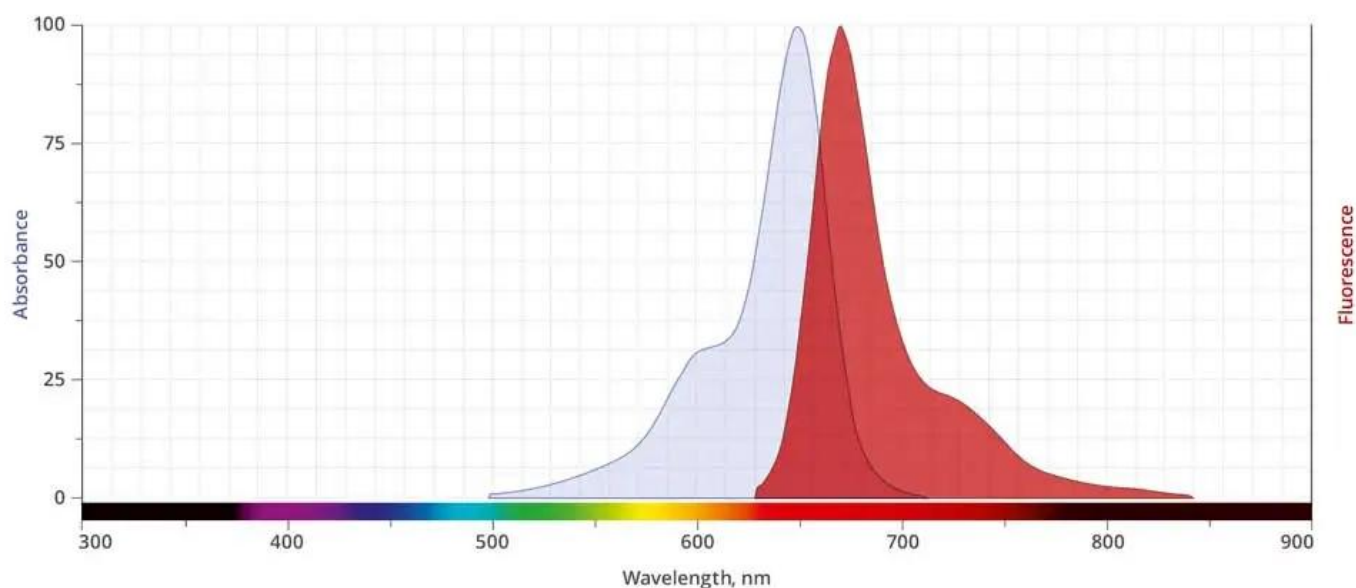
AZDye™ 647 Picolyl Azide is a water-soluble, pH-insensitive from pH 4 to pH 10, far-red-fluorescent probe with excitation ideally suited for the 633 nm or 647 nm laser lines. AZDye™ 647 is structurally similar to Alexa Fluor® 647, and spectrally is almost identical to Cy5 Dye, Alexa Fluor® 647, CF® 647 Dye, or any other Cyanine5 based fluorescent dyes.

SPECIFICATIONS

CAS Number	N/A
Molecular Weight	1061.21 (protonated)
Appearance	Blue solid
Extinction Coefficient	270,000
Purity	>95% (HPLC)
Unit Size	1 mg, 5 mg, 25 mg
Solubility	Water, DMSO, DMF
Storage Instructions	-20°C. Desiccate
Spectrally Similar Dyes	Alexa Fluor® 647, CF® 647, DyLight® 649
Laser Line	633 nm or 647 nm
Excitation/Emission Maximum	648/671 nm
Shipping Conditions	Ambient temperature
Shipping Instructions	Ambient temperature

ABS/EM SPECTRA

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SELECTED REFERENCES

1. Ratnayake, N., *et al.* (2022). CDC7-independent G1/S transition revealed by targeted protein degradation. *Nature.*, **605 (7909)**, 357-365. [[PubMed](#)]
2. Ratnayake, N., *et al.* (2021). Cdt1 inhibits CMG helicase in early S phase to separate origin licensing from DNA synthesis. *bioRxiv*, **e-print**. [[bioRxiv](#)]
3. Köberlin, M. S., *et al.* (2021). LRR1-mediated replisome disassembly promotes DNA replication by recycling replisome components. *J Cell Biol.*, **220 (8)**, e202009147. [[PubMed](#)]
4. Gaebler, A., *et al.* (2016). A highly sensitive protocol for microscopy of alkyne lipids and fluorescently tagged or immunostained proteins. *J. Lipid. Res.*, **57**, 1934-47. [[PubMed](#)]
5. Jiang, H., *et al.* (2014). Monitoring Dynamic Glycosylation in Vivo Using Supersensitive Click Chemistry. *Bioconjugate Chem.*, **25**, 698-706. [[PubMed](#)]
6. Uttamapinant, C., *et al.* (2012). Fast, Cell-Compatible Click Chemistry with Copper-Chelating Azides for Biomolecular Labeling. *Angew. Chem. Int. Ed.*, **51**, 5852-56. [[PubMed](#)]

DOCUMENTS

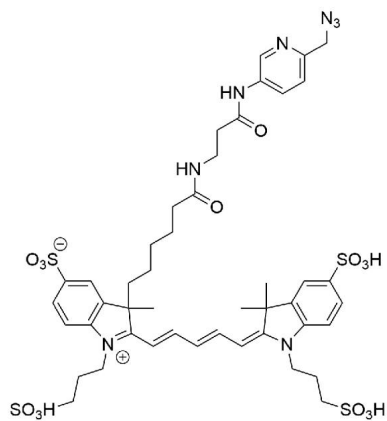
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- [Datasheet](#)

GALLERY IMAGES



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