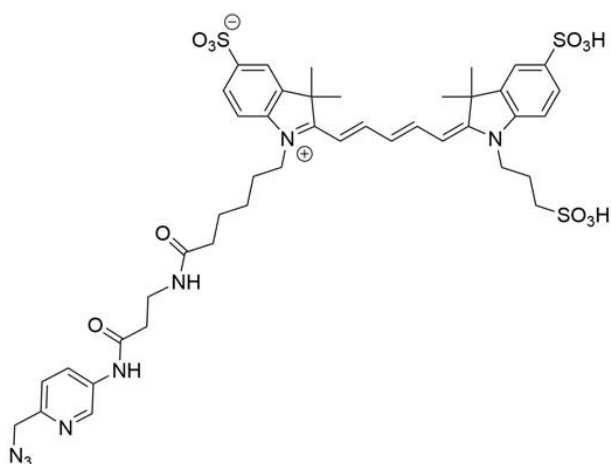




CY5 PICOLYL AZIDE

SKU: CCT-1177



DESCRIPTION

Cy5 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.

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.

Cy5 Picolyl Azide is a water-soluble, pH-insensitive from pH 4 to pH 10, far-red-fluorescent probe

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with excitation ideally suited for the 633 nm or 647 nm laser lines. Cy5 dye is structurally similar, and spectrally is almost identical to Alexa Fluor® 647, CF® 647 Dye, or any other Cyanine5 based fluorescent dyes.

SPECIFICATIONS

CAS Number	N/A
Molecular Weight	1155.5
Molecular Formula	C55H82N10O11S3
Appearance	Blue solid
Chemical Formula	C55H82N10O11S3
Extinction Coefficient	250,000
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	647 nm / 663 nm
Shipping Conditions	Ambient temperature
Shipping Instructions	Ambient temperature

SELECTED REFERENCES

1. Jiang, H., *et al.* (2014). Monitoring Dynamic Glycosylation in Vivo Using Supersensitive Click Chemistry. *Bioconjugate Chem.*, **25**, 698-706. [[PubMed](#)]
2. 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](#)]
3. 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](#)]
4. Knutson, S.D., *et al.* (2020). Chemical Profiling of A-to-I RNA Editing Using a Click-Compatible Phenylacrylamide *Chem. Eur.J.*, **26**, 9874-78. [[PubMed](#)]

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Cy5 Picolyl Azide

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