

Click Chemistry reagents

Lumiprobe provides a comprehensive list of Click Chemistry reagents - azides, alkynes, and auxiliary components.

(are you new to Click Chemistry? [Learn more](#) about this technology!)

Fluorescent dye alkynes

- [Cy3 alkyne](#) – bright cyanine dye
- [Sulfo-Cy3 alkyne](#) – Cy3 dye with high water solubility and photostability
- [Cy5 alkyne](#) – deeply colored red-emitting cyanine dye
- [Sulfo-Cy5 alkyne](#) – water soluble and more photostable Cy5 alkyne
- [Cy5.5 alkyne](#) – near IR dye alkyne
- [Cy7 alkyne](#) – near IR dye alkyne
- [Cy7.5 alkyne](#) – longest wavelength cyanine IR dye alkyne
- [5-FAM alkyne](#) – 5-isomer of FAM
- [6-FAM alkyne](#) – 6-isomer of FAM
- [BDP FL alkyne](#) – bright and photostable alternative for FAM
- [5-TAMRA alkyne](#) – tetramethylrhodamine (TMR, TAMRA) alkyne
- [1-Ethynyl pyrene](#) – polyaromatic hydrocarbon probe for fluorescent microenvironment sensing
- [3-Ethynyl perylene](#) – perylene, a unique polyaromatic hydrocarbon with high quantum yield and unmatched photostability

Fluorescent dye azides

These azides can be used as reagents for Click Chemistry labeling of alkyne-containing molecules.

- [Cy3 azide](#) – the lowest-wavelength cyanine dye
- [Sulfo-Cy3 azide](#) – Cy3 dye with high water solubility and photostability
- [Cy3.5 azide](#) – cyanine dye azide, spectrum is intermediate between Cy3 and Cy5
- [Cy5 azide](#) – one of the most common cyanine fluorophores
- [Sulfo-Cy5 azide](#) – water soluble and more photostable Cy5 azide
- [Cy5.5 azide](#) – near IR dye azide
- [Cy7 azide](#) – near IR dye azide
- [Sulfo-Cy7 azide](#) – water-soluble version of Cy7 azide
- [Cy7.5 azide](#) – longest wavelength cyanine IR dye azide

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- [5-FAM azide](#) – 5-isomer of FAM
- [6-FAM azide](#) – 6-isomer of FAM
- [BDP FL azide](#) – bright and photostable alternative for FAM
- [5-R110 azide](#) – more photostable analog of FAM
- [6-R110 azide](#) – another isomer of R110
- [5-ROX azide](#) – Rhodamine X azide
- [5-TAMRA azide](#) – tetramethylrhodamine (TMR, TAMRA) azide
- [Coumarin 343 azide](#) – coumarine dye azide
- [Pyrene azide](#) – polyaromatic hydrocarbon probe for fluorescent microenvironment sensing
- [Pyrene azide 2](#) and [Pyrene azide 3](#) – other pyrene azides with longer linkers
- [PEP azide](#) – PEP (phenylethynylpyrene) polyaromatic hydrocarbon probe
- [Perylene azide](#) – perylene, a unique polyaromatic hydrocarbon with high quantum yield and unmatched photostability

Bifunctional adapter molecules

Activated ester reagents can be used to convert amino groups, present in many biomolecules, into azides and alkynes, which are reactive in Click Chemistry

- [Azidobutyric acid NHS ester](#) – a reagent converting amino groups to Click-ready azides
- [Alkyne NHS ester](#) – a reagent converting amino groups to alkynes ready for Click Chemistry
- [Pentynoic acid STP ester](#) – another reagent converting amino groups to Click-ready alkynes

Further reactive alkynes for the production of Click chemistry compatible molecules:

- [Alkyne hydrazide](#) – for the conversion of aldehydes and ketones to Click-ready alkynes
- [Alkyne maleimide](#) – for converting sulfhydryl groups to Click-ready alkyne groups

Alkyne amidites (phosphoramidites) for solid phase DNA/RNA synthesis

Since the azido group is incompatible with oligo synthesis, only amidites containing alkynes can be used to prepare oligonucleotides for Click Chemistry.

- [Alkyne amidite, 5'-terminal](#) – a convenient labeling reagent for 5'-alkyne labeling
- [Alkyne amidite, hydroxyprolinol](#) – alkyne phosphoramidite containing a DMT group, for cartridge purification of alkyne-modified oligos.

Auxiliary Click Chemistry reagents

Click Chemistry requires Copper(I)-catalysis to take place. To prepare the catalyst, Lumiprobe recommends mixing Cu(II)-TBTA complex with ascorbic acid prior to reaction. Please see our [recommended protocols](#).

- [Copper\(II\)-TBTA complex](#) – catalyst, stable Cu(II)-form, 10 mM in 55% aq. DMSO
- [Ascorbic acid](#) – recommended reagent to activate stable Cu(II) form of the catalyst prior to reaction

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