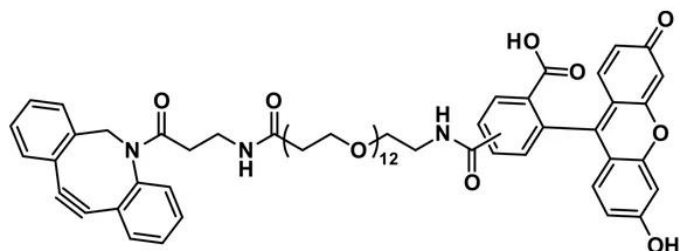




DBCO-dPEG®12-CARBOXYFLUORESCIN

SKU: QBD-11812



DESCRIPTION

DBCO-dPEG®12-carboxyfluorescein, product number QBD-11812, permits fluorescein labeling of peptides, proteins, and other molecules using strain-promoted azide-alkyne cycloaddition (SPAAC). This compound combines the xanthene dye, 5(6)-carboxyfluorescein, with the popular click chemistry alkyne dibenzylcyclooctyne (DBCO) through a medium-length (40 atoms, 47.6 Å), single molecular weight, discrete PEG (dPEG®) spacer. The carboxyfluorescein label has an excitation wavelength (λ_{ex}) of 498 nanometers (nm), and an emission wavelength (λ_{em}) of 528 nm. The molar absorptivity (ϵ) is $7.96 \times 10^4 \text{ M}^{-1} \text{ cm}^{-1}$ at pH 8.0 and 498 nm.

Fluorescein and its derivatives are among the most popular dyes in use today for labeling proteins and cells. Unfortunately, these dyes are hydrophobic, and care must be taken to avoid over-labeling because over-labeling can result in quenching and possibly aggregation and precipitation of the conjugates through non-specific hydrophobic interactions.

DBCO is an increasingly popular choice for SPAAC chemistry, also known as “copper-free click chemistry” because it avoids the use of cytotoxic copper(I) ions and allows reactions to occur in and with living cells. Although DBCO may react with free sulfhydryl groups under some conditions, it is highly selective for azides. Because azides must be introduced artificially into proteins, DBCO is considered a bioorthogonal click chemistry reagent.

The introduction of a flexible dPEG® spacer between carboxyfluorescein and DBCO increases the molecule's hydrodynamic volume and imparts water solubility to DBCO-dPEG®12-carboxyfluorescein. Thus, DBCO-dPEG®12-carboxyfluorescein provides a highly selective,

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flexible, water-soluble way to label proteins, peptides, and cells with carboxyfluorescein using a bio-orthogonal reagent designed to simplify analysis and characterization of the conjugate.

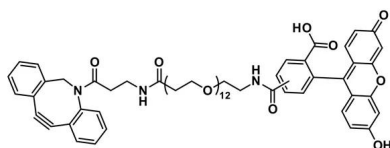
SPECIFICATIONS

CAS Number	N/A
Molecular Weight	1234.34; single compound
Chemical Formula	C ₆₆ H ₇₉ N ₃ O ₂₀
Purity	> 97%
Unit Size	1 mg, 5 mg
Solubility	Methylene Chloride, Methanol, DMAC, or DMSO.
Spacers	dPEG® Spacer is 40 atoms and 47.6 Å
Storage Instructions	-20°C; Always let come to room temperature before opening; be careful to limit exposure to moisture and restore under an inert atmosphere; stock solutions can be prepared with dry solvent and kept for several days (freeze when not in use). dPEG® pegylation compounds are generally hygroscopic and should be treated as such. This will be less noticeable with liquids, but the solids will become tacky and difficult to manipulate, if care is not taken to minimize air exposure.
Shipping Instructions	Ambient

DOCUMENTS

- [Safety Data Sheet](#)
- [Datasheet](#)

GALLERY IMAGES



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