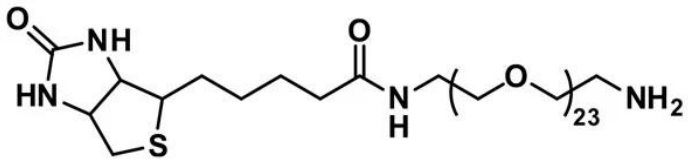
www.vectorlabs.com
Email: customerservice@vectorlabs.com
Telephone: (650) 697-3600

BIOTIN-DPEG®$_{23}$-NH$_2$

SKU: QBD-10786



DESCRIPTION

Biotin-dPEG®23-NH2 (Biotin-dPEG®23-amine), product number QBD-10786, is a carboxylate-reactive biotinylation product on a long (71 atoms), single molecular weight, discrete PEG (dPEG®) spacer. Biotin-dPEG®23-NH2 reacts with activated esters (N-hydroxysuccinimide, 2,3,5,6-tetrafluorophenyl) of carboxylic acids under slightly basic conditions. Moreover, it can be coupled directly to a carboxylic acid using 1-Ethyl-3-(3-dimethylaminopropyl)carbodiimide (EDC) chemistry. Additionally, the product reacts with aldehydes or ketones to form a labile Schiff base. The Schiff base can be reduced to a secondary amine using sodium cyanoborohydride if additional conjugate stability is necessary.
Amphiphilic Biotin-dPEG®23-NH2 dissolves equally well in both aqueous media and organic solvents. Therefore, it is unnecessary to dissolve this product in an organic solvent before using it in an aqueous reaction. Furthermore, biotinylation of biomacromolecules with Biotin-dPEG®23-NH2 will not cause aggregation and precipitation. Eliminating aggregation and precipitation improves the signal-to-noise ratio of applications developed with this product. Reactions with carboxylic acids or active esters of carboxylic acids yield stable amide bonds. Aldehydes are not commonly found in biomacromolecules but can be formed by oxidizing reducing sugars in glycosylated proteins. Reactions with aldehydes create labile imines (Schiff bases) that can be reduced under mild conditions with sodium cyanoborohydride to form more stable secondary amines.

Biotin-dPEG®23-NH2 works in any application that can take advantage of the exceptionally strong biotin-avidin/streptavidin affinity. The terminal amine of QBD-10786 offers the opportunity (1) to biotinylate the carbohydrate coat of glycoproteins by oxidizing reducing sugars to aldehydes and (2) to biotinylate surfaces consisting of carboxylic acids or their active

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esters. Thus, this product expands the range of molecules and nanoparticles in which dPEG®-biotin can be employed.

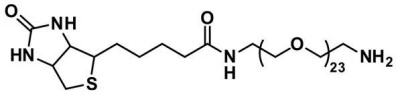
SPECIFICATIONS

CAS Number	604786-74-5
Molecular Weight	1299.60; single compound
Chemical Formula	$C_{58}H_{114}N_4O_{25}S$
Purity	> 95%
Unit Size	100mg, 1000mg
Solubility	Methylene chloride, DMAC, DMSO or water.
Spacers	dPEG® Spacer is 71 atoms and 87.0 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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