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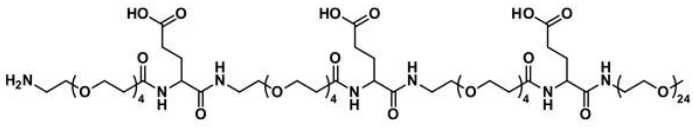
NH_2-DPEG®$_4$-GLU(OH)-[NH-DPEG®$_4$-GLU(OH)]$_2$-NH-M-DPEG®$_{24}$

SKU: QBD-11644



NH2-dPEG®4-Glu(OH)-[NH-dPEG®4-Glu(OH)]2-NH-m-dPEG®24, product number QBD-11644, is one of Vector Laboratories' unique, patented class of modular, designable payload delivery reagents called Sidewinder™. Sidewinder™ products are built on a discrete PEG (dPEG®) backbone for use in antibody-drug conjugates (ADCs) and related constructs. The payload (cytotoxin, dye, small molecule) loads onto the chain's sidearm. The distal end's methoxy-terminated dPEG®24 spacer protects payloads and modifies performance.

The free primary amine of NH2-dPEG®4-Glu(OH)-[NH-dPEG®4-Glu(OH)]2-NH-m-dPEG®24, QBD-11644 reacts with carboxylic acids and their active esters (TFP esters, NHS esters) to form stable amide bonds. It is the attachment point for the Sidewinder™ to the biomolecule (e.g., mAb, Fab, Fab', targeting peptide, and so forth). The backbone contains three (3) carboxylic acid sidearms that react with free amines. Following reaction, protection, or functionalization of the attachment point amino group, the carboxylic acid sidearms can be conjugated to an amine-containing payload. The conjugation can be done directly using EDC or another suitable carbodimide. Alternatively, the carboxylic acids can be functionalized with N-hydroxysuccinimide (NHS) or 2,3,5,6-tetrafluorophenol (TFP) to form the active esters, which can then be reacted with a free amine-containing payload.

Sidewinder™ products are designed to facilitate the creation of stable, high-DAR ADCs. Published research has shown that putting a hydrophobic payload close to the antibody surface and protecting it with a SuperHydrophilic™ dPEG® construct is better by many measures of efficacy than putting the payload at the distal end of the linker. This molecule can also modify and optimize BD, cell trafficking and internalization, serum half-life, and immunogenicity.

The dPEG® linkers and spacers in the Sidewinder™ construct are uniform, single molecular-weight PEGs with discrete chain lengths. In contrast, traditional, non-uniform polymer PEG linkers and spacers have a dispersed range of PEG chain lengths, each with a unique molecular weight. Unlike dispersed polymer PEGs, dPEG® products are high-purity compounds with

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reproducible purity profiles.

Sidewinder™ molecules are also fully designable. NH2-dPEG®4-Glu(OH)-[NH-dPEG®4-Glu(OH)]2-NH-m-dPEG®24 can be modified to change the spacer lengths, add more sidearm attachment points, add different sidearm attachment points to carry payloads with other reactivities, change the amine attachment group to another reactive group, and many more customizations. Please inquire about your specific needs.

Specifications

Unit Size	50 mg, 250 mg
Molecular Weight	2217.52; single compound
Chemical formula	$C_{97}H_{185}N_7O_{48}$
CAS	N/A
Purity	> 95%
Spacers	dPEG® Spacer is 131 atoms and 151.5 Å
Shipping	Ambient
Typical solubility properties (for additional information contact Customer Support)	Methylene Chloride, Methanol or Acetonitrile.
Storage and handling	-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.
