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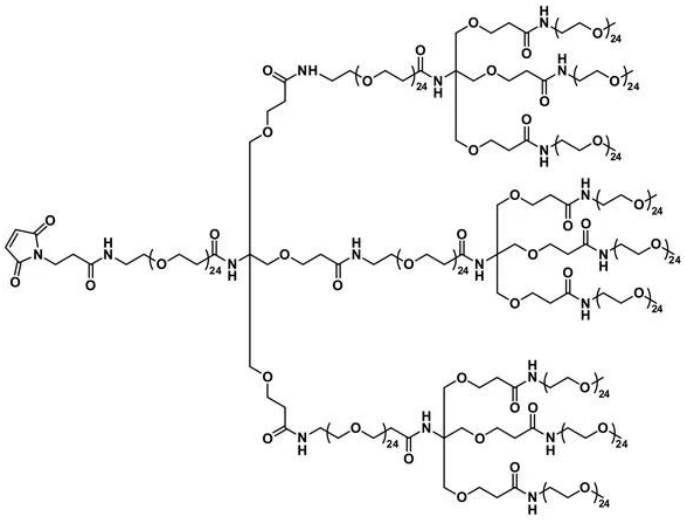
MAL-DPEG®$_{24}$-TRIS(-DPEG®$_{24}$-TRIS (M-DPEG®$_{24}$)$_3$)$_3$

SKU: QBD-11487



MAL-dPEG®24-Tris(-dPEG®24-Tris (m-dPEG®24)3)3, product number QBD-11487, is a nine-branched, 15.4 kDa, sulfhydryl-reactive, monodispersed PEGylation reagent built around tris cores from high-purity, single molecular weight, discrete PEG (dPEG®) compounds. The attachment point is a thiol-reactive maleimide group. Nine uncharged methoxy-terminated dPEG®24 linkers arising from four tris cores in a 1:3 arrangement form the branches. The average dPEG® spacer length from the maleimide ring attachment point to the terminal methoxy groups is 247 atoms (158.8 Å). This product is designed for biomolecular conjugation to modulate the pharmacokinetics (PK) and biodistribution (BD) of biomolecules such as antibodies or other proteins. It may also be used to passivate surfaces to prevent non-specific interactions.

Vector Laboratories' dPEG® technology uses high-purity, single molecular-weight PEG linkers and spacers with discrete chain lengths. In contrast, traditional, non-uniform polymer PEG linkers and spacers have an intractable mixture of different chain lengths of PEG, where each length of PEG in the mix has a unique molecular weight. Analyzing dPEG® products and conjugates made with them is far more straightforward than analyzing non-uniform PEG products and their conjugates.

The terminal maleimide group in MAL-dPEG®24-Tris(-dPEG®24-Tris(m-dPEG®24)3)3, product number QBD-11487, provides the sole attachment point for the dPEG® construct to join a free

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thiol (sulfhydryl) group, forming a stable thioether bond. Surface-accessible, free thiols are uncommon in biomolecules but may be preferred over surface-accessible amines for PEGylation of biomolecules. Free thiols can also be exposed by creating antibody fragments or reduction reactions targeting disulfide bonds.

PEGylation of biomolecules with MAL-dPEG®24-Tris(-dPEG®24-Tris(m-dPEG®24)3)3 greatly increases a conjugate molecule's hydrodynamic volume and water solubility and shields the conjugate from opsonization by the immune system. These effects prevent renal clearance of the conjugate by the body and reduce or eliminate opsonization, extending the conjugate's serum half-life. The longer serum half-life can lead to lower dosing requirements for the PEGylated conjugate compared to the non-PEGylated conjugate while maintaining diagnostic or therapeutic efficacy.

Specifications

Unit Size	25 mg, 100 mg
Molecular Weight	15592.45; single compund;
Chemical formula	$C_{704}H_{1386}N_{18}O_{343}$
CAS	N/A
Purity	> 95%
Spacers	dPEG® Spacer is 247 atoms and 158.8 Å, avg.
Shipping	Ambient
Typical solubility properties (for additional information contact Customer Support)	Methylene Chloride, Methanol, DMAC or DMSO
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.

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