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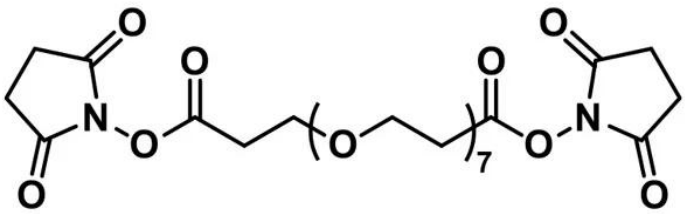
BIS-DPEG®$_7$-NHS ESTER

SKU: QBD-10988



Bis-dPEG®7-NHS ester, product number QBD-10988, is a homobifunctional, amine-reactive, single molecular weight PEG crosslinker with a short (25 atoms, 28.6 Å) discrete PEG (dPEG®) chain length. Each end of the chain terminates as the N-hydroxysuccinimidyl (NHS) ester of propionic acid. Unlike traditional hydrophobic crosslinkers, Bis-dPEG®7-NHS ester will not cause problems such as aggregation, precipitation, and inactivation when conjugated to biomolecules. As a homobifunctional, amine-reactive crosslinker, the primary uses for QBD-10988 are intermolecular conjugation of biomolecules with free, surface-accessible amines and intramolecular modification of biomolecules using free, surface-accessible amines. Because QBD-10988 is one in a line of similar products, Bis-dPEG®7-NHS ester can be used with other products in the same line to probe the effect of different linker lengths on the performance of crosslinked or intramolecularly modified biomolecules.

NHS esters react with free amines such as the ε-amines of lysine. The optimal pH range for NHS esters to react with free amines is 7.0 – 7.5. However, NHS esters can react with free amines with pH as low as 6.5. NHS esters are susceptible to hydrolysis in aqueous media. As the pH increases, the hydrolysis rate of the ester increases. Thus, we strongly discourage storing Bis-dPEG®7-NHS ester in water or aqueous buffer. Instead, we recommend that customers make new solutions of the product as needed, use them immediately, and discard unused solutions after use. If customers desire to store the product in solution, we recommend the use of a pure, anhydrous, water-miscible solvent such as dimethyl sulfoxide (DMSO), N,N-dimethylacetamide (DMAC), or N,N-dimethylformamide (DMF). DMSO, DMAC, or DMF can be dried chemically or by storing for a minimum of 24 hours over 3 Å molecular sieves. With DMF, use only fresh solvent as the compound decomposes over time to form free amines that will react with the NHS esters.

Specifications

Unit Size	100mg, 1000mg

For research use only. Not intended for animal or human therapeutic or diagnostic use.

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Molecular Weight	620.60; single compound
Chemical formula	$C_{26}H_{40}N_2O_{15}$
CAS	1334170-02-3
Purity	> 98%
Spacers	dPEG® Spacer is 25 atoms and 28.6 Å
Shipping	Ambient
Typical solubility properties (for additional information contact Customer Support)	Methylene chloride, Acetonitrile, 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.
