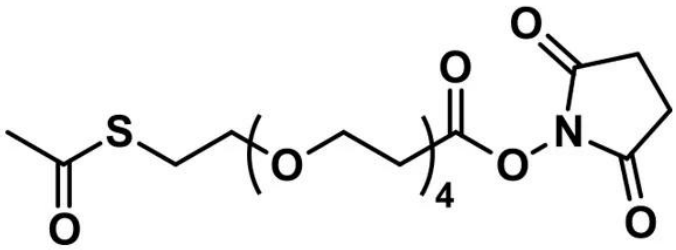
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DPEG®₄-SATA (S-ACETYL-DPEG®₄-NHS ESTER)

SKU: QBD-10181



DESCRIPTION

dPEG®4-SATA, also known as S-acetyl-dPEG®4-NHS ester, product number QBD-10181, is one of Quanta BioDesign's versions of the widely popular thiolation reagent N-succinimidyl-S-acetylthioacetate (SATA). The acetyl-protected thiol is separated from the N-hydroxysuccinimidyl (NHS) ester by an amphiphilic, discrete polyethylene glycol (dPEG®) spacer. The dPEG® spacer adds water solubility to the product.

Thiolation is the process of adding a sulfhydryl group to a molecule. Bioconjugation frequently employs thiolation because the reactions to install thiol groups on molecules or to react molecules with sulfhydryl groups are simple and often chemoselective.

The widely popular SATA reagent thiolates molecules with available amines via the NHS ester. Removal of the acetyl protecting group from the sulfhydryl permits crosslinking between the SATA-modified compound and a target molecule of interest that contains a thiol-reactive group, such as maleimide. Unfortunately, SATA is hydrophobic. Consequently, before use, SATA must be dissolved in a dry, water-miscible organic solvent.

Vector Laboratories' dPEG®4-SATA inserts a single molecular weight tetraethylene glycol (dPEG®4) spacer between the protected thiol and the NHS ester. The dPEG® spacer imparts water solubility to the molecule, allowing dPEG®4-SATA to be dissolved and reacted in water without the need for an organic solvent. Also, the dPEG®4 spacer adds hydrodynamic volume to the molecule to which it is conjugated.

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Increasing the hydrodynamic volume reduces aggregation and precipitation of proteins conjugated to dPEG®4-SATA. Hydroxylamine hydrochloride (CAS number 5470-11-1) easily removes the acetyl protecting group, exposing the sulfhydryl moiety for further reaction. Any application that can be carried out with a traditional, non-PEGylated SATA reagent can be carried out with our SATA containing a dPEG® spacer.

SPECIFICATIONS

CAS Number	937025-17-7
Molecular Weight	421.46; single compound
Chemical Formula	$C_{17}H_{27}NO_9S$
Purity	> 98%
Unit Size	100 mg, 1000 mg
Solubility	Methylene chloride, Acetontrile, DMAC or DMSO.
Spacers	dPEG® Spacer is 16 atoms and 18.3 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

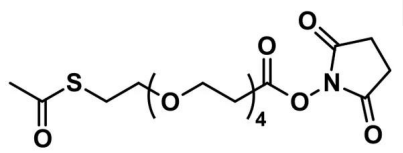
DOCUMENTS

- Safety Data Sheet
- Datasheet

GALLERY IMAGES

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