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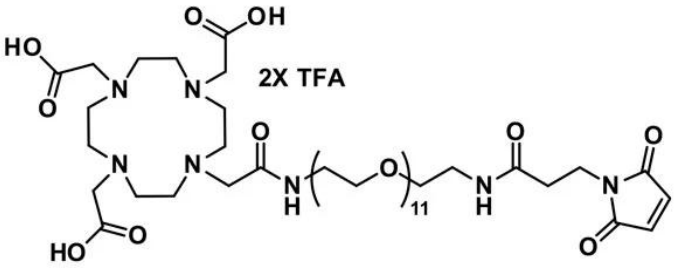
DOTA-TRIS(ACID)-AMIDO-DPEG®$_{11}$-MALEIMIDE

SKU: QBD-11167



DESCRIPTION

DOTA-tris(acid)-amido-dPEG®11-maleimide, product number QBD-11167, links a thiol-reactive maleimide group with the popular, macrocyclic, bifunctional chelator 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid (DOTA) through a medium-length (37 atoms, 43.5 Å), single molecular weight, discrete PEG (dPEG®) linker. The DOTA moiety is designed to chelate trivalent radioisotopes of lanthanides and certain rare earth elements like yttrium. The maleimide group reacts chemoselectively with thiols at pH 6.5 – 7.5 in a click chemistry-like reaction. Because the four acetate groups on the macrocycle are unprotected, this DOTA compound should be conjugated to the target molecule at the end of the synthetic process when no further reactions will be carried out. DOTA products are commonly used in radiopharmacy in imaging, diagnostic, and therapeutic applications.

The medium-length, amphiphilic, flexible dPEG® linker between the DOTA and the TFP ester moieties increases the hydrodynamic volume and water solubility of conjugate molecules. The increased hydrodynamic volume can reduce a conjugate molecule’s renal clearance, thereby increasing serum half-life and reducing the dosage of the conjugate required for efficacy. Moreover, dPEG® is non-immunogenic, and the increased hydrodynamic volume helps reduce the immunogenicity of conjugated molecules.

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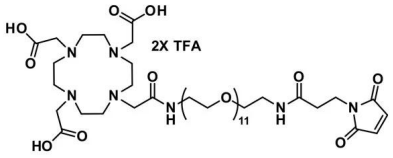
SPECIFICATIONS

CAS Number	N/A
Molecular Weight	1310.24; single compound
Chemical Formula	$C_{47}H_{83}N_7O_{21}$
Purity	> 95%
Unit Size	50 mg, 100 mg, 500 mg
Solubility	Methylene Chloride, DMSO, DMAC, DMF, or Acetonitrile.
Spacers	dPEG® Spacer is 37 atoms and 43.5 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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