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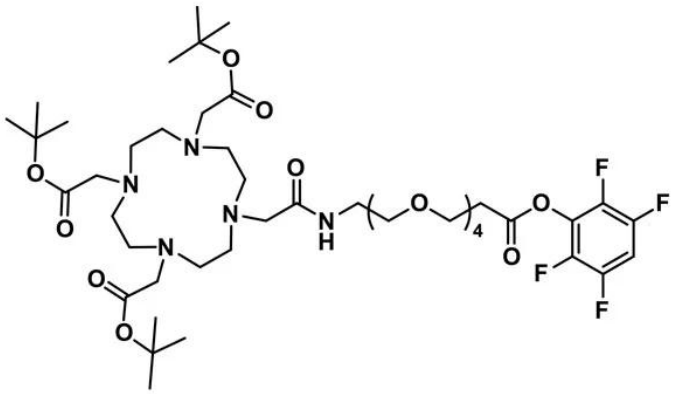
DOTA-TRIS(TBE)-AMIDO-DPEG®₄-TFP ESTER

SKU: QBD-11155



DESCRIPTION

DOTA-tris(TBE)-amido-dPEG®4-TFP ester, product number QBD-11155, contains a DOTA-tris(TBE) group conjugated to a short (16 atoms, 17.8 Å), discrete polyethylene glycol (dPEG®) spacer and functionalized with 2,3,5,6-tetrafluorophenyl (TFP) ester. The TFP ester reacts specifically and efficiently with amines within an optimal pH range of 7.5 – 8.0.

The macrocycle 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid (DOTA) is a popular, effective bifunctional chelator used in radiopharmaceutical applications (radioimaging, radiotherapeutics) that require trivalent lanthanide isotopes and certain rare earth metals such as yttrium. This form of DOTA has the four acetate groups protected with tert-butyl esters (TBE) and is not an effective chelator. However, it is useful in situations where the DOTA needs to be incorporated into the molecule at an early stage of development. The DOTA moiety becomes an effective chelator after the removal of the TBE protecting groups.

The short, 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 act to reduce renal clearance of the conjugate, thereby increasing serum half-life and reducing the dosage of the conjugate required for efficacy. Moreover, dPEG® is non-immunogenic, and its large hydrodynamic volume helps reduce the

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immunogenicity of conjugated molecules.

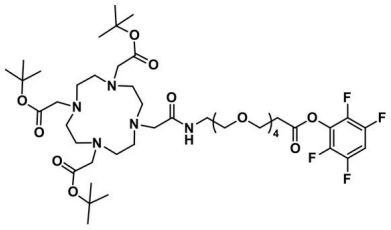
SPECIFICATIONS

CAS Number	N/A
Molecular Weight	968.08; single compound
Chemical Formula	$C_{45}H_{73}F_4N_5O_{13}$
Purity	> 95%
Unit Size	100 mg, 500 mg, 1000mg
Solubility	Methylene Chloride, Acetone, Acetonitrile, Methanol, or DMF.
Spacers	dPEG® Spacer is 16 atoms and 17.8 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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