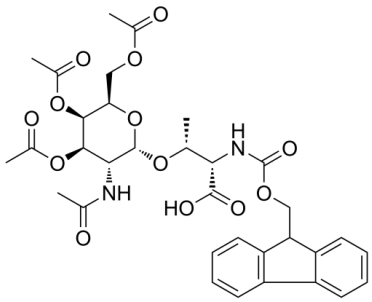
Data Sheet

Product Name:	Fmoc-Thr[GalNAc(Ac)3-α-D]-OH
Cat. No.:	CS-6902
CAS No.:	116783-35-8
Molecular Formula:	$C_{33}H_{38}N_2O_{13}$
Molecular Weight:	670.66
Target:	Amino Acid Derivatives
Pathway:	Others
Solubility:	DMSO : ≥ 100 mg/mL (149.11 mM)



BIOLOGICAL ACTIVITY:

Fmoc-Thr[GalNAc(Ac)3-α-D]-OH i a building block in the development of cancer vaccine. ***In Vitro:*** The O-glycosidic linkage and the O-acetyl protection in this building block is stable to both piperidine and TFA, making it completely compatible with standard protocols in Fmoc solid phase peptide synthesis. The Tn antigen is a tumor-associated carbohydrate antigen that is not normally expressed in peripheral tissues or blood cells. Expression of this antigen, which is found in a majority of human carcinomas of all types, arises from a blockage in the normal O-glycosylation pathway in which glycans are extended from the common precursor GalNAcα1-O-Ser/Thr (Tn +antigen). This precursor is generated in the Golgi apparatus on newly synthesized glycoproteins by a family of polypeptide α- N-acetylgalactosaminyltransferases (ppGalNAcTs) and then extended to the common core 1 O-glycan Galβ1-3GalNAcα1-OSer/Thr (T antigen) by a single enzyme termed the T-synthase (core 1 β3-galactosyltransferase or C1GalT). Formation of the active form of the T-synthase requires a unique molecular chaperone termed Cosmc, encoded by ***Cosmc*** on the X-chromosome[1].

References:

[1]. Ju T, et al. The Cosmc connection to the Tn antigen in cancer. Cancer Biomark. 2014 Jan 1;14(1):63-81.

CAIndexNames:

L-Threonine, N-[(9H-fluoren-9-ylmethoxy)carbonyl]-O-[3,4,6-tri-O-acetyl-2-(acetylamino)-2-deoxy-α-D-galactopyranosyl]-

SMILES:

O=C(N[C@H](C(O)=O)[C@@H](C)O[C@@H](O[C@H](COC(C)=O)[C@H](OC(C)=O)[C@@H]1OC(C)=O)[C@@H]1NC(C)=O)OCC2C(C=CC=C3)=C3C4=CC=CC=C24

Caution: Product has not been fully validated for medical applications. For research use only.

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