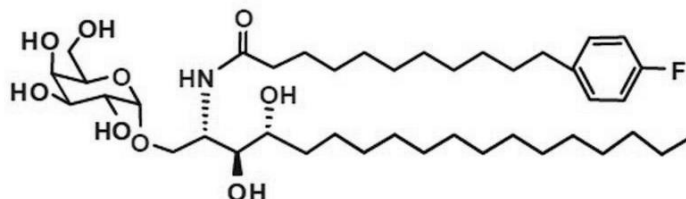


Catalog Number : 7DW8-5

Lot Number : 15K-B

Size : 1mg

Chemical structure



Chemical name :

[(2S, 3S, 4R)-1-O-(α -D-galactopyranosyl)-N-(11-(4-fluorophenyl)undecanoyl)-2-amino-1,3,4-octadecanetriol]]

Molecular formula : C₄₁H₇₂FNO₉

Molecular weight : 742.00

Purity : 98% (HPLC Area %)

Endotoxin : <100 EU/mg

Appearance : White to off-white powder with no visible contamination.

Solubility : 7DW8-5 is practically insoluble in water, methanol or ethanol. 7DW8-5 is soluble in dimethyl sulfoxide (DMSO). The solutions in phosphate buffered saline (PBS) with 10% Tween 20 or 80 remained clear at 4°C for 7 days. The solution in PBS with 5% Tween 80 remained clear at 4 °C for 5 days. After more than 20 days at 4°C the samples became gel-like substance except the solution in PBS with 10% Tween 80 which remained clear solution with some floats.

Storage : Short term storage +4°C, Long term storage -20°C

Shipping : **Shipped on Blue ice**

License : This product is licensed by The Rockefeller University.

Warning : Research use only. Not for use in humans.

Background :

There are a number of glycolipids synthesized, some of which are analogs of α -galactosyl ceramide (α -Gal-Cer), a marine sponge lipid that is the most extensively studied CD1d ligand to date. These compounds were tested for their ability to stimulate human invariant natural killer T (iNKT) cell lines, secretion of key cytokines such as IFN- γ and IL-12, and activate autologous dendritic cells, as well as binding to CD1d and the invariant T-cell receptor. A lead compound, 7DW8-5, emerged from these studies and this glycolipid exhibits a stronger adjuvant effect than α -Gal-Cer in various HIV vaccine platforms in mice. 7DW8-5 also provides a protective adjuvant effect with a candidate malaria vaccine when tested in mice infected with malaria parasites.

While the majority of the studies performed focus on the potential of the glycolipids as a vaccine adjuvant, it is foreseeable that the compounds could also be used as a potential immunotherapeutic to treat cancer, infectious diseases, and autoimmune diseases.

References :

- 1) Li X, Fujio M, Imamura M, Wu D, Vasan S, Wong C-H, Ho DD, Tsuji M. 2010. Design of a novel CD1d-binding NKT cell ligand as a vaccine adjuvant. Proc. Natl. Acad. Sci. USA. 107: 13010-13015.
- 2) Padte NN, Li X, Tsuji M, Vasan S. 2011. Clinical Development of a Novel CD1d-binding NKT Cell Ligand as a Vaccine Adjuvant. Clin. Immunol. 140: 142-151.