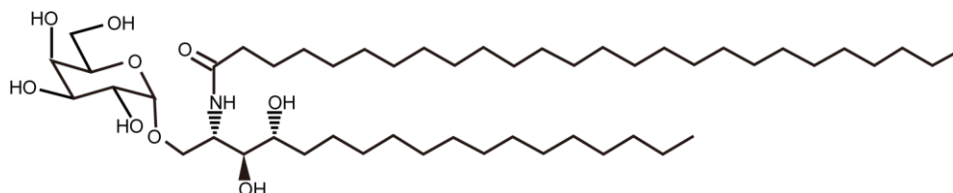


Catalog Number KRN7000
CAS No 158021-47-7

Chemical Structure



Chemical Name

(2S,3S,4R)-1-O-(α -D-galactosyl)-N-hexacosanoyl-2-amino-1,3,4-octadecanetriol

Molecular Formula C₅₀H₉₉NO₉
Molecular Weight 858.34
Purity >99% (TLC)
Structure Confirmed by Proton NMR
Biological Activity %(CD1D-tet⁺ TCR β ⁺) by FCM
Appearance White to off-white powder
Solubility KRN7000 is practically insoluble in water, methanol or ethanol, very slightly soluble in tetrahydrofuran, slightly soluble in pyridine, and practically insoluble in other organic solvents.
Storage Short term storage +4°C, long term storage -20 °C
License This product is licensed by Kyowa Hakko Kirin Co., Ltd.

Example of how to dissolve for biological assay

KRN7000 can be dissolved as follows for various biological examinations:

In vivo administration: KRN7000 can be dissolved in a vehicle described by Giaccone et al. (10). Such a vehicle consists of 5.6% sucrose, 0.75% L-histidine, and 0.5% Tween 20. After mixing, the solution should be heated at 80 °C until the material becomes completely dissolved and disappeared. This solution can be lyophilized and lyophilized powder can be reconstituted easily by pure water.

In vitro use: KRN7000 can be dissolved in DMSO at a concentration of 1mg/ml. The solution should be heated at 80 °C to get a clear solution.

For Research Use Only. Not For Human Use.

Background

α -Galactosylceramide (α -Gal-Cer; KRN7000), an agelasphin derivative developed by Kirin Brewery Co., Ltd., is a biological response modifier (BRM). Agelasphins was isolated from an extract of the marine sponge, *Agelas mauritianus*, as active substances. They are compounds with α -Galactosylceramide structures, that is, galactose combined with ceramide in an α -configuration.

α -Gal-Cer; KRN7000, a chemically synthesized α -Galactosylceramide, is a specific ligand for human and mouse natural killer T (NKT) cells, KRN7000 exhibits potent antitumor activity in various kinds of in vivo murine experimental models including subcutaneously implanted model and metastatic models in the liver and lung. In the liver metastatic models, treatment with KRN7000 suppressed the growth of tumors and prolonged the survival term of tumor-bearing mice. KRN7000 has been reported to show various immunological effects in infectious disease, autoimmune disease, and graft versus host disease in mice.

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