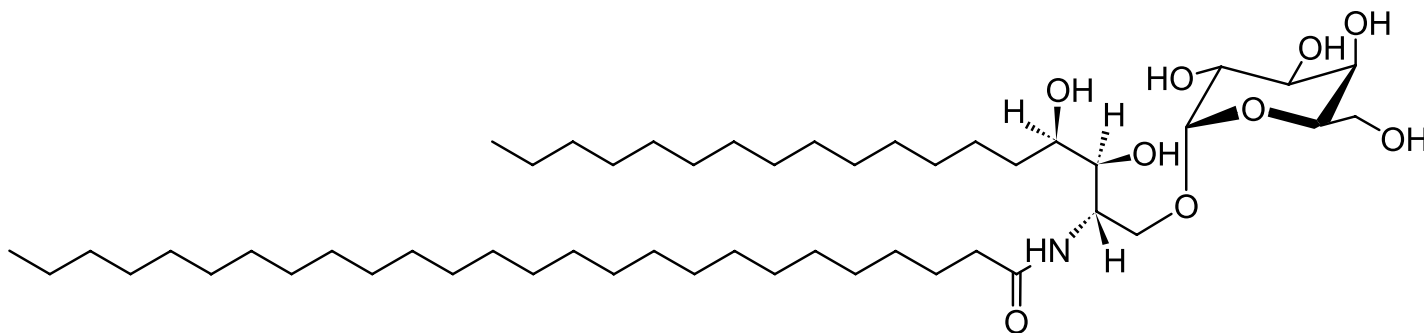


TECHNICAL DATA SHEET

α -Galactosyl Ceramide

Catalog Number	867000	Physical state	Powder
Purity	> 95%	Transition temp.	No data
CAS	158021-47-7	CMC	No data
Synonyms	α GalCer; KRN7000; (2S,3S,4R)-1-O-(D-galactosyl)-N-hexacosanoyl-2-amino-1,3,4-octadecanetriol	pK_a	No data
Molec. Formula	C ₅₀ H ₉₉ NO ₉	TLC mobile phase	C:M*, 85:15, v/v
MW	858.322	Exact Mass	857.732
Percent composition	C 69.97% H 11.63% N 1.63% O 16.78%		
Stability	Store in <-20°C freezer for up to one year		
Solubility	Soluble in DMSO at 60-80°C + Sonication. Note: solidifies at room temperature in DMSO (i.e. keep warm with sonication). Concentration should be 1 mg/mL and can be diluted in PBS. For in vivo assays, dissolve in 5.6% sucrose, 0.75% L-histidine and 0.5% Tween20 at 60-80°C + Sonication. Insoluble in water, ethanol, or methanol.		
Web link	867000		

*C, Chloroform, M, Methanol



Description:

Agelasphins extracted from the marine sponge *Agelas mauritianus* were found to have antitumor activity. One agelasphin analog, KRN7000, is a synthetic analog of α -galactosylceramide (Park *et al*, 2008). KRN7000 is a specific ligand for the MHC class I-like protein CD1d (Yu *et al*, 2007) which binds to human and mouse NKT cells. This action of KRN7000 stimulates the secretion of IFN-gamma and TNF-alpha cells which protects against LPS-induced shock (Sireci *et al*, 2008). KRN7000 also functions in other proinflammatory and immunoregulatory functions (Yu *et al*, 2007). Recent monoclonal antibodies against KRN7000 have been developed (*et al*, 2007) to elucidate further the role KRN7000 plays in these T-lymphocytes. KRN7000 is currently in multiple clinical trials for its antimetastatic effects.

References:

- Sireci, G *et al* (2008) Prophylaxis of lipopolysaccharide-induced shock by alpha-galactosylceramide. *J Leukoc Biol.* 84(2):550-60.
- Park, JJ *et al* (2008) Synthesis of all stereoisomers of KRN7000, the CD1d-binding NKT cell ligand. *Bioorg Med Chem Lett.* 18(14): 3906-3909.
- Yu, KO *et al* (2007) Production and characterization of monoclonal antibodies against complexes of the NKT cell ligand alpha-galactosylceramide bound to mouse CD1d. *Immunol Methods.* 323(1):11-23.
- Fuji, N *et al* (2000) Antitumor effect of α -galactosylceramide (KRN7000) on spontaneous hepatic metastases requires endogenous interleukin 12 in the liver. *Clin Cancer Res.* 6: 3380-3387.

Related products: **Sphingolipids**

MSDS: Available at www.avantilipids.com for Product Number 867000

