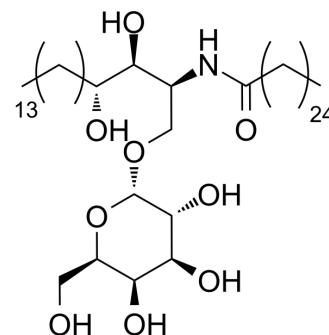


α -Galactosylceramide

Cat. No.:	HY-102022		
CAS No.:	158021-47-7		
Molecular Formula:	C ₅₀ H ₉₉ NO ₉		
Molecular Weight:	858.34		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 0.5 mg/mL (0.58 mM); ultrasonic and warming and heat to 60°C)
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BIOLOGICAL ACTIVITY

Description	α -Galactosylceramide (α -GalCer) is a synthetic glycolipid with antitumoral and immunostimulatory. α -Galactosylceramide is a very potent NKT cell agonist and binds effectively to CD1d. The complex of α -Galactosylceramide plus CD1d binds the NKT cell TCR (T cell antigen receptor) ^{[1][2][3][4]} .
IC₅₀ & Target	NKT cell ^[3]
In Vitro	Culture supernatants of activated V α 24+NKT-cell cultures stimulated with α -Galactosylceramide pulsed monocyte-derived dendritic cells (Mo-DCs) exhibits antiproliferative activities against melanoma cells. This effect is predominantly due to release of IFN- γ , and to a lesser extent IL-12. Other cytokines, including IL-4 and IL-10, are released but these cytokines have less antiproliferative effects. V α 24+NKT-cells stimulated by α -Galactosylceramide-pulsed Mo-DCs have anti-tumour activities against human melanoma through antiproliferative effects exerted by soluble mediators ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	α -Galactosylceramide treatment can protect against spontaneous, carcinogen-, or oncogene-induced primary tumor formation in mice. Consistent with a prime role for IFN- γ in NKT cell-mediated tumor responses, a C-glycoside analog of α -Galactosylceramide that preferentially stimulated IFN- γ production is even more effective than α -Galactosylceramide at preventing metastases of the B16 melanoma ^[1] . Since α -Galactosylceramide shows a potent antitumor activity and stimulates the lymphocyte proliferation (LP) on allogeneic mixed lymphocyte reaction (MLR) in the mouse, α -Galactosylceramide is considered to be a nonspecific immunostimulating agent which is a biological response modifier ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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[2]. Morita M, et al. Practical Total Synthesis of (2S,3S,4R)-1-O-(α -D-Galactopyranosyl)-N-hexacosanoyl-2-amino-1,3,4-octadecanetriol, the Antitumorial and Immunostimulatory α -Galactosylceramide, KRN7000. *Biosci Biotechnol Biochem.* 1996 Jan;60(2):288-92.

[3]. Kikuchi A, et al. In vitro anti-tumour activity of alpha-galactosylceramide-stimulated human invariant Valpha24+NKT cells against melanoma. *Br J Cancer.* 2001 Sep 1;85(5):741-6.

[4]. Masahiro Morita, et al. Structure-Activity Relationship of .alpha.-Galactosylceramides against B16-Bearing Mice. *J. Med. Chem.* 1995, 38, 12, 2176-2187.

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

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