

2015

### World's standard α – Galactosyl Ceramide

# KRN7000 α - Galactosyl Ceramide

For more information: http://www.funakoshi.co.jp/exports\_contents/46127

α-Galactosylceramide(α-Gal-Cer; KRN7000) was developed by Kyowa Hakko Kirin Company, as a biological response modifier. The α-Gal-Cer was isolated from an extract of the marine sponge, Agelas mauritianus, as an active substance which has galactose combined with ceramide in an αconfiguration. α-Gal-Cer (KRN7000), a chemically synthesized α-Galactosylceramide, is a specific ligand for human and mouse natural killer T (NKT) cells. α-Gal-Cer exhibits potent antitumor activity in various kinds of in vitro murine experimental models including subcutaneously implanted model and metastatic models in the liver and lung. In the liver metastatic models, treatment with  $\alpha$ -Gal-Cer suppressed the growth of tumors and prolonged the survival term of tumor-bearing mice. α-Gal-Cer has been reported to show various immunological influence in infectious disease, autoimmune disease, and graft versus host disease in mice.

### Structure

### For the research of...

- Anti-tumor response
- Anti-autoimmune response
- Anti-inflammation

through NKT – Dendritic Cells immune system

### Citation

Chang CH et al., PLoS One. 2015 Mar 25;10(3):e0121320.

Ando et al., Oncol Rep. 2015 Feb;33(2):826-32.

Hasegawa et al., Anticancer Res. 2014 Jul:34(7):3411-7.

Nakamura et al., J Control Release. 2013 Oct 28;171(2):216-24

JJ O'Konek et al., Clin Cancer Res. 2013 Aug 15;19(16):4404-11

Thomsen MK et al., J Clin Invest. 2013 Dec;123(12):5258-68

Bjordahl RL et al., PLoS One. 2012;7(8):e42635.

... and more!

### Our KRN7000 is used on Proimmune's CD1d tetramers! PROIMMUNE WWw.proimmune.com



Note: Alpha-GalCer (KRN7000) is for research use only, not for use in human, therapeutic or diagnostic applications without the expressed written authorization of Kyowa Hakko Kirin Company. Kyowa Hakko Kirin Company has issued a worldwide license for KRN7000 research to Funakoshi Company.

### **Product Information**

[Manufacture: KRN]

Product Name	Size	Catalog #	Storage
α-Galactosylceramide <α-Gal-Cer>, <krn7000></krn7000>	1 mg	KRN7000	-20℃



### Newly developed derivative of α-Gal-Cer

2015

## 7DW8-5

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There are a number of glycolipids synthesized, some of which are analogs of  $\alpha$ -galactosyl ceramide ( $\alpha$ -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- $\gamma$  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  $\alpha$ -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. %This product is licensed by The Rockefeller University.

### **Structure**

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- Anti-tumor response
- Anti-autoimmune response
- Anti-inflammation

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### Citation

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.

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.

### **Product Information**

[Manufacture: FRK]

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Product Name	Size	Catalog #	Storage	
7DW8-5	1 mg	7DW8-5	-20℃	
	<ul> <li>Company name and product name are trademark or registered mark.</li> <li>Please contact your local distributors for orders, quote request and inquiry.</li> </ul>			

#### Your Local Distributor



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Fax : +49(0)89-517 286 59-88 Email : info@pelobiotech.com



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