

## PRODUCT DATA SHEET

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**AG-CN2-0013** 10-Mar-2011

## α-Galactosylceramide

[\alpha-Gal-Cer; KRN7000]

 $\begin{array}{cccc} AG-CN2-0013-C250 & 250 \ \mu g \\ AG-CN2-0013-M001 & 1 \ mg \end{array}$ 

 $\begin{array}{lll} \text{Formula} & & \text{$C_{50}$H}_{99}\text{NO}_9 \\ \text{MW} & & 858.3 \end{array}$ 

Handling / Storage

Shipping BLUE ICE
Short Term Storage +4°C
Long Term Storage -20°C

Aliquot into glass vials.

**Use / Stability** 

Stable for at least 2 years after receipt when stored at -20°C.

MSDS available at www.adipogen.com or upon request.

**Product Specifications** 

Purity ≥96% (NMR)

Identity Identity determined by <sup>1</sup>H-NMR.

Appearance Off-white solid. Solubility Soluble in pyridine.

**Product Description** 

• Synthetic. Originally isolated from the marine sponge Angelas mauritianus [1].

• Immunostimulant [1, 2, 3].

• Potent stimulator of natural killer T (NKT) cells [4, 5].

• Specific ligand of the lipid-binding MHC class I-like protein CD1d in human and mouse NKT cells [5].

· Protects against LPS-induced shock [7].

· Potent antitumor compound [2, 6, 8].

**WARNING:** Intended for research use only. This product is not intended or approved for human, diagnostics, therapeutic or veterinary use. Use of this product for human or animal testing is extremely hazardous and may result in disease, severe injury, or death. **MATERIAL SAFETY DATA:** Review the complete Material Safety Data Sheet before use.

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## **Product Specific References**

- 1. Synthesis of alpha-, beta-monoglycosylceramides and four diastereomers of an alpha-galactosylceramide: M. Morita, et al.; Bioorg. Med. Chem. Lett. **5**, 699 (1995)
- 2. Immunostimulatory and antitumor activities of monoglycosylceramides having various sugar moieties: K. Motoki, et al.; Biol. Pharm. Bull. **18,** 1487 (1995)
- 3. Immunostimulatory activities of monoglycosylated alpha-D-pyranosylceramides: A. Uchimura, et al.; Bioorg. Med. Chem. **5**, 2245 (1997)
- 4. Activation of natural killer T cells by alpha-galactosylceramide rapidly induces the full maturation of dendritic cells in vivo and thereby acts as an adjuvant for combined CD4 and CD8 T cell immunity to a coadministered protein: Fujii S, et al.; J. Exp. Med. **198**, 267 (2003)
- 5. Modulation of CD1d-restricted NKT cell responses by using N-acyl variants of alpha-galactosylceramides: K.O. Yu, et al.; PNAS **102**, 3383 (2005)
- 6. A phase I study of alpha-galactosylceramide (KRN7000)-pulsed dendritic cells in patients with advanced and recurrent non-small cell lung cancer: A. Ishikawa, et al.; Clin. Cancer Res. **11**, 1910 (2005)
- 7. Pivotal advance: alpha-galactosylceramide induces protection against lipopolysaccharide-induced shock: G. Sireci, et al.; J. Leukoc. Biol. **81**, 607 (2007)
- 8. α-Galactosylceramide activates antitumor immunity against liver tumor: T. Tatsumi, et al.; Hepatol. Res. **41**, 160 (2011)

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