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## DATASHEET

$\alpha$ -Galactosylceramide ( $\alpha$ -GalCer) (KRN7000)

### Product overview

<b>Name</b>	$\alpha$ -Galactosylceramide ( $\alpha$ -GalCer) (KRN7000)
<b>Cat No</b>	HB3751
<b>Alternative names</b>	$\alpha$ -Gal-Cer; KRN7000, aGC
<b>Purity</b>	>96%
<b>Description</b>	Immunostimulant. Natural killer T cell stimulator.

### Images



### Biological Data

<b>Biological description</b>	<p>Alpha-GalCer is an immunostimulant. It is a potent stimulator of natural killer T (NKT) cells and a specific ligand of the lipid-binding MHC class I-like protein CD1d in human and mouse NKT cells.</p> <p>It protects against LPS-induced shock and is also a potent antitumor compound.</p> <p>Synthetic. Originally isolated from the marine sponge <i>Angelas mauritanus</i>.</p>
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### Solubility & Handling

<b>Storage instructions</b>	-20 °C
<b>Solubility overview</b>	Soluble in Tween20 or PBS for cell culture use. Also Soluble in pyridine (not suitable for cell culture). Aliquot into glass vials.
<b>Handling</b>	<p>This compound is is inherently an extremely hydrophobic molecule and is insoluble in water, methanol, ethanol and other organic solvents. It is very slightly soluble in tetrahydrofuran and pyridine. Almost all methods for solubilizing this material in primarily aqueous media will contain at least some detergent and somewhat cloudy solutions may be produced which are still acceptable to use.</p> <p>Some example protocols are as follows:</p>

#### Tween20 & Sodium Chloride, Heat/Sonicate

- Dissolve  $\alpha$ -GalCer in 0.5% Tween20, 0.9% NaCl solution
- Heat to 85 °C until solution turns cloudy
- Take out of water bath und keep at RT

C<sub>50</sub>H<sub>99</sub>NO<sub>9</sub>  
158021-47-7  
354334933  
CCCCCCCCCCCCCCCCCCCCCCCCCC(=O)NC(CO[C@H]1O[C@H](CO)[C@H](O)[C@H](O)[C@H]1O)[C@H](O)[C@H](O)CCCCCCCCCCCCCCC  
Originally isolated from the marine sponge *Angelas mauritanus*  
LSUQVAFARUJTHS-ABBGRRHVSA-N

**MDL number**  
**Appearance**

MFCD00939559  
Off-white solid

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## References

**Stimulation of invariant natural killer T cells by  $\alpha$ -Galactosylceramide activates the JAK-STAT pathway in endothelial cells and reduces angiogenesis in the 5T33 multiple myeloma model.**

Nur et al (2014) Br J Haematol 167(5)

**PubMedID** [25142285](#)

**$\alpha$ -Galactosylceramide stimulates splenic lymphocyte proliferation in vitro and increases antibody production in vivo in late neonatal-age mice.**

Chen and Ross (2015) Clin Exp Immunol 179(2)

**PubMedID** [25178151](#)

**Activation of natural killer T cells by alpha-galactosylceramide in the presence of CD1d provides protection against colitis in mice.**

Saubermaun et al (2000) Gastroenterology 119(1)

**PubMedID** [10889161](#)

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