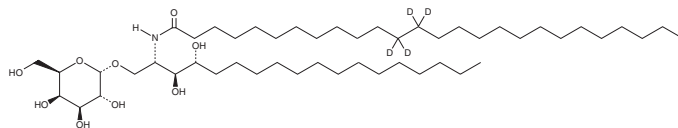


PRODUCT INFORMATION



KRN 7000-d₄
Item No. 42987

CAS Registry No.: 1632461-03-0
Formal Name: N-[(1S,2S,3R)-1-[(α-D-galactopyranosyloxy)methyl]-2,3-dihydroxyheptadecyl]-hexacosanamide-12,12,13,13-d₄
MF: C₅₀H₉₅D₄NO₉
FW: 862.4
Chemical Purity: ≥95% (KRN 7000)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Supplied as: A solution in chloroform:methanol (2:1)
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

KRN 7000-d₄ is intended for use as an internal standard for the quantification of KRN 7000 (Item No. 11208) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Description

KRN 7000 is a synthetic α-galactosylceramide and ligand for the lipid antigen-presenting molecule CD1d.^{1,2} KRN 7000 anchors to the hydrophobic cleft of CD1d on antigen-presenting cells, and binding of this complex to T cell receptors induces activation of invariant natural killer T (iNKT) cells.² It has been used as an adjuvant to induce iNKT cell activation in mice.³

References

1. Van Der Vliet, H.J.J., Nishi, N., Koezuka, Y., *et al.* Effects of α-galactosylceramide (KRN7000), interleukin-12 and interleukin-7 on phenotype and cytokine profile of human Va24⁺ Vβ11⁺ T cells. *Immunology* **98**(4), 557-563 (1999).
2. Saavedra-Avila, N.A., Pigni, N.B., Caldwell, D.R., *et al.* A humanized mouse model coupled with computational analysis identifies potent glycolipid agonist of invariant NKT cells. *ACS Chem. Biol.* **19**(4), 926-937 (2024).
3. Yang, D., Luo, X., Lian, Q., *et al.* Fully synthetic Tn-based three-component cancer vaccine using covalently linked TLR4 ligand MPLA and iNKT cell agonist KRN-7000 as built-in adjuvant effectively protects mice from tumor development. *Acta Pharm. Sin. B* **12**(12), 4432-4445 (2022).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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