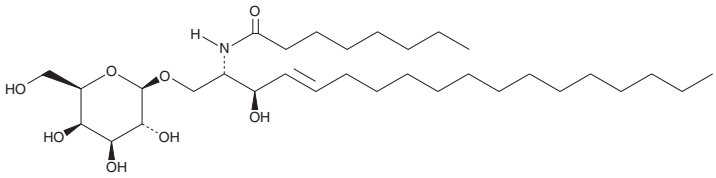
PRODUCT INFORMATION

C8 Galactosylceramide (d18:1/8:0)

Item No. 24346

CAS Registry No.:	41613-16-5
Formal Name:	N-[(1S,2R,3E)-1-[(β-D-galactopyranosyloxy) methyl]-2-hydroxy-3-heptadecen-1-yl]-octanamide
Synonyms:	Galactosylceramide (d18:1/8:0), N-octanoyl-β-D-Galactosylceramide, GalCer(d18:1/8:0)
MF:	$C_{32}H_{61}NO_8$
FW:	587.8
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

C8 Galactosylceramide (d18:1/8:0) is supplied as a solid. A stock solution may be made by dissolving the C8 galactosylceramide (d18:1/8:0) in the solvent of choice. C8 Galactosylceramide (d18:1/8:0) is soluble in ethanol, methanol, and a 9:1 solution of chloroform:methanol.

Description

C8 Galactosylceramide is a synthetic C8 short-chain derivative of known membrane microdomain-forming sphingolipids.[1] It increases the amount delivered and toxicity of doxorubicin (Item No. 15007) in cancerous but not non-cancerous cells when incorporated into the nanoliposomal membrane of nanoliposomal-doxorubicin. C8 Galactosylceramide induces proliferation and cytokine production by splenocytes *in vitro* at concentrations ranging from 100-1,000 ng/ml but has no effect on natural killer T cell production *in vivo*.[2] It also activates NF-κB production in C6 glioma cells when used at a concentration of 10 µM.[3]

References

1. Pedrosa, L.R., van Hell, A., Süss, R., *et al.* Improving intracellular doxorubicin delivery through nanoliposomes equipped with selective tumor cell membrane permeabilizing short-chain sphingolipids. *Pharm. Res.* **30(7)**, 1883-1895 (2013).
2. Parekh, V.V., Singh, A.K., Wilson, M.T., *et al.* Quantitative and qualitative differences in the in vivo response of NKT cells to distinct α- and β-anomeric glycolipids. *J. Immunol.* **173(6)**, 3693-3706 (2004).
3. Chang, Y.-T., Choi, J., Ding, S., *et al.* The synthesis and biological characterization of a ceramide library. *J. Am. Chem. Soc.* **124(9)**, 1856-1857 (2002).

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