

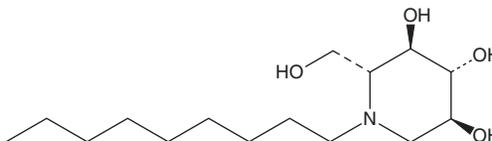
PRODUCT INFORMATION



N-Nonyldeoxynojirimycin

Item No. 29698

CAS Registry No.: 81117-35-3
Formal Name: (2R,3R,4R,5S)-2-(hydroxymethyl)-1-nonyl-3,4,5-piperidinetriol
Synonyms: NN-DNJ, Nonyl-DNJ
MF: C₁₅H₃₁NO₄
FW: 289.4
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

N-Nonyldeoxynojirimycin is supplied as a solid. A stock solution may be made by dissolving the N-nonyldeoxynojirimycin in the solvent of choice, which should be purged with an inert gas. N-Nonyldeoxynojirimycin is slightly soluble in methanol and DMSO.

Description

N-Nonyldeoxynojirimycin (NN-DNJ) is an inhibitor of acid α -glucosidase and α -1,6-glucosidase (IC_{50} s = 0.42 and 8.4 μ M, respectively).¹ NN-DNJ (250 mg/kg per day) increases hepatic glycogen levels in fasted mice and gastrocnemius muscle glycogen levels in both fasted and fed mice. It is a chemical chaperone of β -glucosidase that increases activity by 1.65-fold in patient-derived fibroblasts homozygous for the N370S Gaucher disease mutation when added to the culture medium at a concentration of 5 μ M, but inhibits β -glucosidase activity at concentrations greater than 60 μ M.² NN-DNJ inhibits viral replication in BHK-21 cells infected with Japanese encephalitis virus (JEV) or dengue virus serotype 2 (DEN-2) and has protective effects in a mouse model of lethal JEV challenge when administered at a dose of 200 mg/kg per day.³

References

- Andersson, U., Reinkensmeier, G., Butters, T.D., *et al.* Inhibition of glycogen breakdown by imino sugars *in vitro* and *in vivo*. *Biochem. Pharmacol.* **67**(4), 697-705 (2004).
- Sawkar, A.R., Cheng, W.-C., Beutler, E., *et al.* Chemical chaperones increase the cellular activity of N370S β -glucosidase: A therapeutic strategy for Gaucher disease. *Proc. Natl. Acad. Sci. USA.* **99**(24), 15428-15433 (2002).
- Wu, S.-F., Lee, C.-J., Liao, C.-L., *et al.* Antiviral effects of an iminosugar derivative on flavivirus infections. *J. Virol.* **76**(8), 3596-3604 (2002).

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.

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