

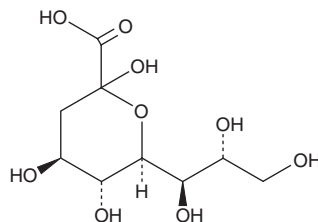
PRODUCT INFORMATION



3-Deoxy-D-glycero-D-galacto-2-nonulosonic Acid

Item No. 17862

CAS Registry No.: 153666-19-4
Formal Name: 3-deoxy-D-glycero-D-galacto-2-nonulopyranosonic acid
Synonyms: Deaminoneuraminic acid, KDN, Ketodeoxynonulosonic acid
MF: C₉H₁₆O₉
FW: 268.2
Purity: ≥95%
Supplied as: A crystalline 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

3-Deoxy-D-glycero-D-galacto-2-nonulosonic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 3-deoxy-D-glycero-D-galacto-2-nonulosonic acid in the solvent of choice, which should be purged with an inert gas. 3-deoxy-D-glycero-D-galacto-2-nonulosonic acid is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 3-deoxy-D-glycero-D-galacto-2-nonulosonic acid in these solvents is approximately 30 and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 3-deoxy-D-glycero-D-galacto-2-nonulosonic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 3-deoxy-D-glycero-D-galacto-2-nonulosonic acid in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Sialic acids, commonly present as terminal carbohydrates on glycoconjugates, are essential for a variety of cellular functions including cell adhesion and signal recognition, as well as the formation and progression of tumors. 3-Deoxy-D-glycero-D-galacto-2-nonulosonic acid is a deaminated sialic acid that was first identified at the nonreducing ends of oligosialyl chains in rainbow trout egg glycoprotein.¹ It is thought to be a precursor for the biosynthesis of other members of the sialic acid family.² 3-Deoxy-D-glycero-D-galacto-2-nonulosonic acid can be used to analyze nonulosonic acid residues in polysialoglycoproteins.¹

References

1. Nadano, D., Iwasaki, M., Endo, S., *et al.* A naturally occurring deaminated neuraminic acid, 3-deoxy-D-glycero-D-galacto-nonulosonic acid (KDN). Its unique occurrence at the nonreducing ends of oligosialyl chains in polysialoglycoprotein of rainbow trout eggs. *J. Biol. Chem.* **261**(25), 11550-11557 (1986).
2. Münster-Kühnel, A.K., Tiralongo, J., Krapp, S., *et al.* Structure and function of vertebrate CMP-sialic acid synthetases. *Glycobiology* **14**(10), 43R-51R (2004).

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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