

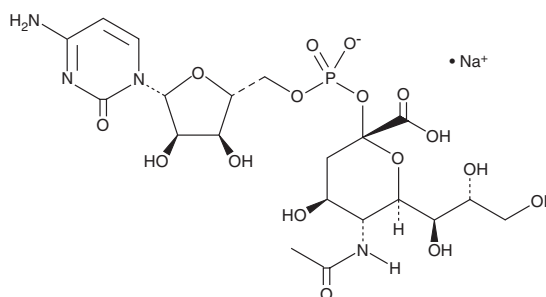
PRODUCT INFORMATION



CMP-Sialic Acid (sodium salt)

Item No. 16404

CAS Registry No.: 1007117-62-5
Formal Name: N-acetyl-2-(hydrogen 5'-cytidylate)- β -neuraminic acid, monosodium salt
Synonym: CMP-Neu5Ac
MF: $C_{20}H_{30}N_4O_{16}P \cdot Na$
FW: 636.4
Purity: $\geq 85\%$
UV/Vis.: λ_{max} : 274 nm
Supplied as: A crystalline solid
Storage: $-20^\circ C$
Stability: ≥ 4 years



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

Laboratory Procedures

CMP-Sialic acid (sodium salt) is supplied as a crystalline solid. Aqueous solutions of CMP-sialic acid (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of CMP-sialic acid (sodium salt) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

CMP-Sialic acid is a form of the sugar N-acetylneuraminic acid (Neu5Ac) O-linked with the nucleotide cytidine-5'-monophosphate (CMP). In vertebrates, it is biosynthesized within the nucleus from CTP and Neu5Ac by CMP-sialic acid synthetases.¹ Sialyltransferases transfer Neu5Ac from CMP-sialic acid to various acceptor substrates, most commonly at terminal positions of the oligosaccharide component of glycoproteins or glycolipids.^{2,3} Sialic acid-containing glycans at the cell surface play important roles in cell interactions and have roles in infection, inflammation, and cancer.³⁻⁵

References

1. 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).
2. Tsuji, S. Molecular cloning and functional analysis of sialyltransferases. *J. Biochem.* **120**(1), 1-13 (1996).
3. Audry, M., Jeanneau, C., Imberty, A., *et al.* Current trends in the structure-activity relationships of sialyltransferases. *Glycobiology* **21**(6), 716-726 (2011).
4. Hennet, T. From glycosylation disorders back to glycosylation: What have we learned? *Biochim. Biophys. Acta.* **1792**(9), 921-924 (2009).
5. Samraj, A.N., Läubli, H., Varki, N., *et al.* Involvement of a non-human sialic acid in human cancer. *Front. Oncol.* **4**, 33 (2014).

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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