

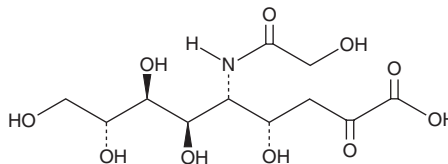
PRODUCT INFORMATION



N-Glycolylneuraminic Acid

Item No. 30283

CAS Registry No.: 1113-83-3
Formal Name: N-(2-hydroxyacetyl)-neuraminic acid
Synonyms: Neu5Gc, N-glycolyl-Neuraminic Acid
MF: $C_{11}H_{19}NO_{10}$
FW: 325.3
Purity: $\geq 95\%$
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

N-Glycolylneuraminic acid (Neu5Gc) is supplied as a crystalline solid. Aqueous solutions of Neu5Gc can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of Neu5Gc in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Neu5Gc is a sialic acid that is found in non-human primate tissues.^{1,2} It is not endogenously produced in humans due to a mutation in the gene that encodes CMP-Neu5Ac hydroxylase, the enzyme that hydrolyzes N-acetylneuraminic acid to form Neu5Gc, but accumulates in human cells after exogenous ingestion from dietary sources such as red meat and dairy products. Neu5Gc accumulates in human tumors, including retinoblastomas, melanomas, colon carcinomas, and breast cancer, and Neu5Gc uptake is enhanced under hypoxic conditions.²

References

1. Nguyen, D.H., Tangvoranuntakul, P., and Varki, A. Effects of natural human antibodies against a nonhuman sialic acid that metabolically incorporates into activated and malignant immune cells. *J. Immunol.* **175**(1), 228-236 (2005).
2. Hedlund, M., Padler-Karavani, V., Varki, N.M., *et al.* Evidence for a human-specific mechanism for diet and antibody-mediated inflammation in carcinoma progression. *Proc. Natl. Acad. Sci. USA* **105**(48), 18936-18941 (2008).

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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