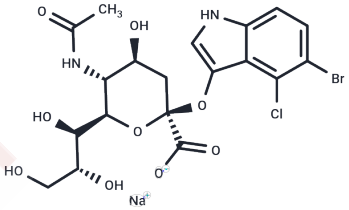
Data Sheet (Cat.No.T21486)

TargetMol

X-NeuNAc

Chemical Properties



CAS No. : 160369-85-7

Formula: C19H21BrClN2NaO9

Molecular Weight: 559.72

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	X-NeuNAc (5-Bromo-4-chloro-3-indolyl-alpha-D-N-acetylneuraminic acid sodium salt) is a new chromogenic assay substrate of neuraminidase activity in bacterial expression systems.
Targets(IC50)	Others,Antibacterial
In vitro	X-Neu5Ac was hydrolyzed by neuraminidase to release a halogenated product undergoing rapid aerobic oxidation to form the dark blue pigment. Preliminary kinetic studies indicated that X-Neu5Ac was a good and stable substrate for neuraminidase. In addition, X-Neu5Ac would also be hydrolyzed mutant enzymes
In vivo	To visualize extracellular sialidase activity on the membrane surface in the rat brain, acute brain slices were incubated with X-NeuNAc at pH 7.3. After 1h, myelin-abundant regions showed intense fluorescence in the rat brain. Although the hippocampus showed weak fluorescence in the brain, mossy fiber terminals in the hippocampus showed relatively intense fluorescence. In addition, the fluorescence intensities caused by X-NeuNAc was correlated with the sialidase activity. Therefore, staining with X-NeuNAc was specific for sialidase and useful for quantitative analysis of sialidase activities [1].

Solubility Information

Solubility	DMSO: 250 mg/mL (446.65 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (17.87 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7866 mL	8.933 mL	17.8661 mL
5 mM	0.3573 mL	1.7866 mL	3.5732 mL
10 mM	0.1787 mL	0.8933 mL	1.7866 mL
50 mM	0.0357 mL	0.1787 mL	0.3573 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Fujii I,Iwabuchi Y,Teshima T,Shiba T,Kikuchi M. X-Neu5Ac: a novel substrate for chromogenic assay of neuraminidase activity in bacterial expression systems. Bioorg Med Chem.1993 Aug;1(2):147-9.