

N-acetylneuraminic acid/Sialic acid

Product Information

Product Name: N-Acetylneuraminic acid

CAS Number: 131-48-6

Molecular Formula :C₁₁H₁₉NO₉

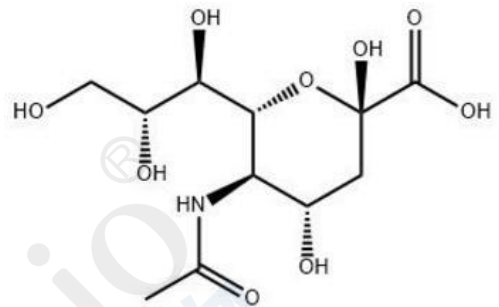
Molecular Weight :309.27

Purity: 98%

Appearance:White to off-white powder

Packaging:25kg/drum

Storage:Store at 2-8°C.Protect from moisture.



Product Introduction

N-Acetylneuraminic acid, a carbohydrate ubiquitous in nature, serves as a fundamental constituent in numerous glycoproteins, glycopeptides, and glycolipids. Its biological roles are extensive, encompassing the regulation of blood protein half-life, neutralization of various toxins, facilitation of cell adhesion, mediation of immune antigen-antibody reactions, and shielding cells from lysis. Additionally, biochemical derivatives of sialic acid find common application in drug synthesis. N-Acetylneuraminic acid acts as the substrate for N-acetylneuraminate aldolase, an enzyme involved in its metabolic processing.

Applications

1) Infant formula:

N-acetylneuraminic acid is an important component of brain gangliosides, with nerve cell membranes containing approximately 20 times more N-acetylneuraminic acid compared to other cells. Given that brain function, including information transmission and nerve impulse conduction, relies on synapses, N-acetylneuraminic acid influences brain cell membranes and synapses. As a nutrient, N-acetylneuraminic acid promotes memory and intelligence development by supporting brain function.

2) Food Nutritional Supplements:

N-acetylneuraminic acid exhibits antioxidative properties by neutralizing toxic hydrogen peroxide. Studies conducted by Japanese researchers have demonstrated that N-acetylneuraminic acid supplementation in cell culture mediums inhibits cell death induced by hydrogen peroxide, suggesting its role as a reactive oxygen species scavenger. Furthermore, N-acetylneuraminic acid displays notable anti-inflammatory effects and enhances the intestinal absorption of essential vitamins and minerals, making it a valuable nutritional supplement.

3) Anti-influenza and Anti-Alzheimer's Drugs:

One of the primary agents in the global drug precursor market is Zanamivir, an effective inhibitor of influenza virus neuraminidase, which is crucial for viral replication. Derived from modification of N-acetylneuraminic acid monomer, Zanamivir is utilized for both prevention and treatment of influenza. N-acetylneuraminic acid exhibits a protective and stabilizing effect on nerve cells by inhibiting degradation by extracellular proteases upon binding to proteases located on the nerve cell membrane. Moreover, decreased levels of N-acetylneuraminic acid in the blood or brain of patients with certain neurological disorders, such as early Alzheimer's disease and schizophrenia, suggest its involvement in nerve cell metabolism. Recovery from drug treatment typically restores N-acetylneuraminic acid levels to normal, further highlighting its role in neurological health.

4) Cosmetics:

Sialic acid, known for its protective and stabilizing properties, influences the lifespan of blood cells and the quantity and vitality of enzyme proteins involved in metabolism, thereby delaying cell aging. As a skincare ingredient, sialic acid serves as a nourishing product, enhancing skin texture and radiance while effectively combating signs of aging.



Service Hotline: 400-021-8158

International Market: www.allinno.com

Website: www.seebio.com/ www.seebio.cn

E-mail: [foodadd@seebio.cn/](mailto:foodadd@seebio.cn) [finechem@seebio.cn/](mailto:finechem@seebio.cn) [sales@seebio.cn/](mailto:sales@seebio.cn) market@seebio.cn

Address: Building 5, No. 508 Chuanhong Road, Pudong, Shanghai 201202, P.R.China

