Creative Enzymes®

N-Acetylneuraminic acid

Cat. No. CEFX-279

Lot. No. (See product label)

Introduction

Description

N-Acetylneuraminic acid, commonly known as sialic acid, is a naturally occurring aminosugar that was originally isolated from mucin in the submandibular gland of cattle, hence the name sialic acid. Sialic acid is a nine-carbon monosaccharide derivative containing an amino group, and is a general term for all N- or O-derivatives of neuraminic acid or keto-deoxynonulosonic acid (KDN). Sialic acid is usually found as oligosaccharides, glycolipids, or glycoproteins, mainly as short-chain residues at the ends of glycoproteins and glycolipids.N-Acetylneuraminic acid has several known sources of affixes and forms, free N-acetylneuraminic acid, oligosaccharides sialic acid lactose, sialic acid-containing gangliosides, and casein megapeptides (CMP, Macropeptide. Glycomacropeptide GMP, Glycomacropeptide, Caseinoglycomacropeptide cGMP, Caseinoglycomacropeptide). N-Acetylneuraminic acid is produced by fermentation using Escherichia coli, through the process route of bacterial liquid separation, ultrafiltration concentration, removal of impurities (proteins, soluble salts), purification of polysialic acid, hydrolysis of polysialic acid, and purification of monomeric N-Acetylneuraminic acid, and N-Acetylneuraminic acid purity of more than 98% by HPLC analysis.

Applications

Infant Formula N-Acetylneuraminic acid is an important component of brain gangliosides, which are found in the membranes of nerve cells 20 times more than in other cells. It acts on brain cell membranes through synapses to promote memory and intellectual development. Studies have shown that increased intake of N-acetylneuraminic acid during lactation can increase levels in the infant's brain and enhance learning and memory. Food Supplements N-Acetylneuraminic acid depletes toxic hydrogen peroxide, inhibits cell death caused by it, and acts as a scavenger of reactive oxygen species. It also has anti-inflammatory effects and improves intestinal absorption of vitamins and minerals. In Japan, N-acetylneuraminic acid is often added to sweets containing salivary acid as a nutritional supplement. Anti-influenza and anti-Alzheimer's drugs N-Acetylneuraminic acid is widely used in the field of drug intermediates. Zanamivir is an effective N-acetylneuraminic acid inhibitor used in influenza prevention and treatment.N-acetylneuraminic acid protects and stabilizes nerve cells, prevents the proteases on the surface of nerve cell membranes from being degraded, and participates in the metabolism of nerve cells, treating neurological disorders such as early Alzheimer's disease and schizophrenia. Cosmetics Ointments and sprays containing N-acetylneuraminic acid have been developed in Japan to promote healthy hair growth and are sold as cosmetics. Due to its antioxidant effects, N-acetylneuraminic acid is also added to creams and lotions.

Product Information

Appearance	White fluffy powder
Form	powder
Purity	98%

Usage and Packaging

Package	1kg/bag

Storage and Shipping Information

Storage	The product may be stored for at least 24 months from the date of manufacture in its sealed container under normal temperatures in a dry and enclosed environment. Keep container tightly closed.