

Sialic Acid (N-Acetylneuraminic Acid)



VASTNESS BIOTECH CO.,LTD

Sialic Acid



Sialic acid is a group of neurotransmitters (9-carbon monosaccharides), known as "N-acetylneuraminic acid". It is a naturally occurring carbohydrate and a ubiquitous substance in the biological world, widely present in vertebrates, mammals, and various plant tissues. Sialic acid is one of the eight essential sugar nutrients for the human body, with the main food source being breast milk, followed by milk, eggs, and cheese.

Sialic acid was first extracted from salivary gland mucin and named after the high content of sialic acid in bird's nest, ranging from 7% to 12%. Therefore, sialic acid is also known as "bird's nest acid".

Our product is manufactured using food-grade glucose and corn syrup as raw materials, which undergo a process of fermentation, filtration, sterilization, hydrolysis, and purification with *Escherichia coli* to obtain the final product.

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Scientific Research

《Achievements and challenges of sialic acid research》

Glycoconjugate Journal 2000 Jul-Sep;17(7-9):485-99.


DOI: 10.1023/a:1011062223612

Conclusion: Research has found that sialic acid can inhibit white blood cell adhesion and combat inflammation, exerting antibacterial and anti-inflammatory effects. Numerous studies have shown that sialic acid not only interacts with bacteria, but may also interact with viruses to exert antiviral functions.


《Recent progress in antiviral chemotherapy for

respiratory syncytial virus infections » *EXPERT Opinion on Investigational Drugs* [01 Feb2000,9(2):221-235] DOI:10.1517/13543784.9.2.221

Conclusion: Sialic acid and its derivatives play an important role in inhibiting sialidase and combating respiratory syncytial viruses.

 **« Inhibition of human parainfluenza virus type 1 sialidase by analogs of 2-deoxy-2,3-didehydro-N-acetylneuraminic acid** » *Glycoconjugate Journal* 18, 331-337,2001
DOI:10.1023/A:1013617232576

Conclusion: Sialic acid and its derivatives play important roles in inhibiting sialidase and combating parainfluenza viruses.

 **« Natural and synthetic sialic acid-containing inhibitors of influenza virus receptor binding** » *Matrosovi, Hans-Dieter Klenk* *Rev.Med.Virol.*2003;13:85-97. DOI:10.1002/rmv.372

Conclusion: Sialic acid and its derivatives play an important role in inhibiting sialidase and resisting influenza viruses.

 **« Antiviral effect of sulfated sialyl lipid against a clinical strain of adenovirus** » *Nippon Ganka Gakkai Zasshi* 01 Apr 2003 , 107(4):196-201

Conclusion: Sialic acid and its derivatives play an important role in inhibiting sialidase and anti adenovirus activity.

☁️ 《 **Initial Interaction of Rotavirus Strains with N-Acetylneuraminic (Sialic) Acid Residues on the Cell Surface Correlates with VP4 Genotype, Not Species of Origin** 》 *Journal of virology, Apr.2002,p.4087-4095* DOI : [10.1128/JVI.76.8.4087-4095.2002](https://doi.org/10.1128/JVI.76.8.4087-4095.2002)

Conclusion: Sialic acid and its derivatives play an important role in inhibiting sialidase and resisting rotavirus.

☁️ 《 **The role and potential of sialic acid in human nutrition** 》 *Wang.B, Brand-Miller.J European Journal of Clinical Nutrition(2003)57,1351-1369* DOI:[10.1038/sj.ejcn.1601704](https://doi.org/10.1038/sj.ejcn.1601704)

Conclusion: Sialic acid has various physiological functions and plays a very important role in regulating human physiological and biochemical functions, such as anti-inflammatory, influenza treatment, antiviral, anti-tumor, etc.


The efficacy of N-acetylneuraminic acid:

★ *The "brain gold" of intellectual development: N-acetylneuraminic acid plays a mediating role in gangliosides in the brain.*


★ *Improve intestinal absorption capacity*

★ *Anti influenza virus: promoting intestinal antibacterial detoxification,*

N-acetylneuraminic acid on cell membrane proteins plays a key role in improving cell recognition ability, detoxifying cholera toxin, preventing pathological Escherichia coli infection, and regulating the half-life of blood proteins.





 **Improving immunity:** *N-acetylneuraminic acid can enhance the body's immunity, especially in children.*

 **Longevity enhancing:** *N-acetylneuraminic acid has protective and stabilizing effects on cells*

 **Antioxidation and anti-aging:** *N-acetylneuraminic acid can consume toxic hydrogen peroxide (H₂O₂)*

Application of N-acetylneuraminic acid

Due to the physiological versatility of N-acetylneuraminic acid, there are markets in the following fields:

-  **Medical products, anti influenza and antiviral, etc**
-  **Infant formula**
-  **Food ingredients and nutritional supplements**
-  **Cosmetics**

Production dosage forms: capsules, powders, solid beverages, dairy products/infant formula, candies, specialty foods, etc.



*Please reach out to us if you need any product
of Sialic Acid*

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