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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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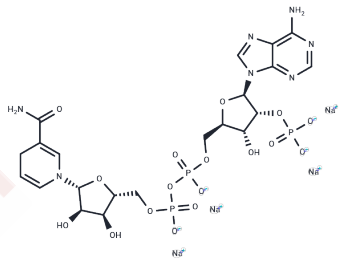
Data Sheet (Cat.No.T7092)

TargetMol

NADPH tetrasodium salt

Chemical Properties



CAS No. :	2646-71-1
Formula:	C21H26N7Na4O17P3
Molecular Weight:	833.35
Appearance:	no data available
Storage:	store at low temperature,keep away from direct sunlight Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	NADPH tetrasodium salt is the reduced form of the electron acceptor nicotinamide adenine dinucleotide phosphate, which acts as an electron donor in a variety of biological reactions. NADPH tetrasodium salt is also an endogenous inhibitor of ferroptosis.
Targets(IC50)	Others,Ferroptosis,Endogenous Metabolite
In vitro	**METHODS**: Neurons were pretreated with NADPH tetrasodium salt (2.5-10 μM) for 1-8 h, then treated with Kainic acid (KA, 100 μM) for 8 h. Cell viability was measured by CCK-8 assay. **RESULTS**: KA treatment significantly reduced the cell viability of primary cortical neurons in a time-dependent and dose-dependent manner, and NADPH pretreatment significantly promoted neuronal survival, which was more effective at 10 μM for 4 or 8 h. The **RESULTS** showed that Kainic acid (KA, 100 μM) treatment significantly reduced the cell viability of primary cortical neurons. [1] **METHODS**: Neurons were pretreated with NADPH tetrasodium salt (10 μM) for 4 h, and then treated with Kainic acid (KA, 100 μM) for 8 h. The expression levels of target proteins were detected by Western Blot. **RESULTS**: The expression of TIGAR was decreased after KA treatment, and it was significantly reversed by NADPH. [1]
In vivo	**METHODS**: To examine the effects on Kainic acid (KA)-induced excitotoxicity and its mechanism, NADPH tetrasodium salt (1-2 mg/kg in saline) was administered intravenously to KA-induced rats once a day for seven days. **RESULTS**: NADPH reduced KA-induced increase in striatal lesion size, improved KA-induced dyskinesia, and reversed KA-induced glial cell activation. [1] **METHODS**: NADPH tetrasodium salt (2.5 mg/kg) was intravenously injected into ICR mice to determine whether exogenous NADPH could enter the brain tissues and neurons of mice. **RESULTS**: Injection of NADPH significantly increased the levels of NADPH in the blood and brain tissue of mice.The half-life of NADPH in the blood of mice is about 6 h and in the brain tissue is 7 h. [2]

Solubility Information

Solubility	DMSO: 1.25 mg/mL (1.5 mM),Sonication is recommended. H2O: 35 mg/mL (42.00 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.200 mL	5.9999 mL	11.9998 mL
5 mM	0.240 mL	1.200 mL	2.400 mL
10 mM	0.120 mL	0.600 mL	1.200 mL
50 mM	0.024 mL	0.120 mL	0.240 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.

Reference

Liu ZQ, et al. NADPH protects against kainic acid-induced excitotoxicity via autophagy-lysosome pathway in rat striatum and primary cortical neurons. Toxicology. 2020 Apr 15;435:152408.