

N-Acetyl lysyltyrosylcysteine amide

Chemical Properties

CAS No. : 1287585-40-3

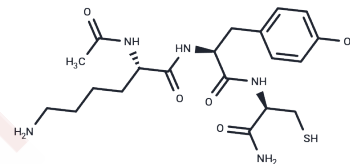
Formula: C₂₀H₃₁N₅O₅S

Molecular Weight: 453.56

Store at low temperature

Storage: 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	N-Acetyl lysyltyrosylcysteine amide is a non-toxic, potent, reversible, and specific myeloperoxidase (MPO) tripeptide inhibitor that effectively inhibits MPO production in vivo, attenuates neuronal damage, preserves brain tissue and neurological function post-stroke, and inhibits MPO-dependent hypochlorite (HOCl) production, protein nitration, and LDL oxidation. It is also used in the study of bronchial dysplasia.
Targets(IC50)	Glutathione Peroxidase
In vivo	<p>N-Acetyl lysyltyrosylcysteine amide (KYC) (10 mg/kg; i.p.; daily for 3-7 days; C57BL/6j mice) significantly reduces neurological severity scores and infarct size in MCAO mice.[1]</p> <p>N-Acetyl lysyltyrosylcysteine amide (10 mg/kg; i.p.; daily for 7 days) significantly protects BBB function and decreased neutrophil infiltration.[1]</p> <p>N-Acetyl lysyltyrosylcysteine amide (10 mg/kg; i.p.; daily for 7 days; C57BL/6j mice) significantly reduces microglia/macrophage activation and neuron loss in MCAO mice. [1]</p> <p>N-Acetyl lysyltyrosylcysteine amide (10 mg/kg; i.p.; daily for 3-7 days; C57BL/6j mice) decreases apoptosis and cell injury in the brains of MCAO mice.[1]</p> <p>N-Acetyl lysyltyrosylcysteine amide reduced MPO in the brains of MCAO mice. N-Acetyl lysyltyrosylcysteine amide reduces NO₂Tyr and 4-HNE in MCAO mice. N-Acetyl lysyltyrosylcysteine amide significantly decreases infarct size, blood-brain barrier leakage, infiltration of myeloid cells, loss of neurons, and apoptosis in the brains of middle cerebral artery occlusion (MCAO) mice.[1]</p>

Solubility Information

Solubility	DMSO: 55 mg/mL (121.26 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2048 mL	11.0239 mL	22.0478 mL
5 mM	0.441 mL	2.2048 mL	4.4096 mL
10 mM	0.2205 mL	1.1024 mL	2.2048 mL
50 mM	0.0441 mL	0.2205 mL	0.441 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

Yu G, et al. Inhibition of myeloperoxidase oxidant production by N-acetyl lysyltyrosylcysteine amide reduces brain damage in a murine model of stroke [published correction appears in J Neuroinflammation. 2016;13(1):166]. J Neuroinflammation. 2016;13(1):119. Published 2016 May 24.

Zhang H, et al. N-acetyl lysyltyrosylcysteine amide inhibits myeloperoxidase, a novel tripeptide inhibitor. J Lipid Res. 2013;54(11):3016-3029.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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