

N-Palmitoyl Glycine

Chemical Properties

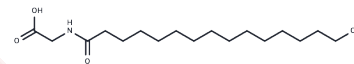
CAS No. : 2441-41-0

Formula: C18H35NO3

Molecular Weight: 313.48

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-Palmitoyl Glycine is an endogenous lipid that modulates calcium influx and nitric oxide (NO) production in sensory neurons. It is associated with an increased risk of Brugada syndrome (BrS), interacts with BrS-related proteins, and shows moderate binding affinity to molecules including DCC, CR1, CTSB, NAAA, DEFB1, EPHA1, IGF1/IGFBP3/ALS, and LTA.
Targets(IC50)	Calcium Channel,NO Synthase
In vitro	Methods: The effect of N-Palmitoyl Glycine on calcium ion influx was examined in adult dorsal root ganglion (DRG) cells and DRG-like cell lines. Its effects on nitric oxide (NO) production and calcium-sensitive nitric oxide synthase (NOS) were investigated in F-11 cells. Results: 1.N-Palmitoyl Glycine induced transient calcium ion influx in adult DRG cells and DRG-like cell lines [3]. 2.N-Palmitoyl Glycine promoted nitric oxide (NO) production via calcium-sensitive nitric oxide synthase (NOS) expressed in F-11 cells [3].
In vivo	Methods: The effect of N-Palmitoyl Glycine on the electrical activity of pain-sensitive neurons in the rat dorsal horn was observed. Results: N-Palmitoyl Glycine potently inhibited heat-evoked firing of pain-sensitive neurons in the rat dorsal horn [3].

Solubility Information

Solubility	DMSO: 4 mg/mL (12.76 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	3.190 mL	15.950 mL	31.900 mL
5 mM	0.638 mL	3.190 mL	6.380 mL
10 mM	0.319 mL	1.595 mL	3.190 mL
50 mM	0.0638 mL	0.319 mL	0.638 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

Neta Rimmerman, et al. N-palmitoyl glycine, a novel endogenous lipid that acts as a modulator of calcium influx and nitric oxide production in sensory neurons. *Mol Pharmacol.* 2008 Jul;74(1):213-24.

Xu H, et al. N-Palmitoyl glycine activates transient receptor potential channel 5 and increases the risk of Brugada syndrome[J]. *medRxiv*, 2024: 2024.10. 21.24315897.

Bradshaw HB, et al. Novel endogenous N-acyl glycines identification and characterization. *Vitam Horm.* 2009;81: 191-205.

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