

Nepetoidin B

Chemical Properties

CAS No. : 55486-06-1

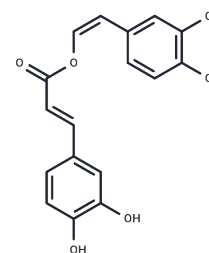
Formula: C17H14O6

Molecular Weight: 314.29

Storage: Keep away from direct sunlight, Keep away from moisture, Store at low temperature

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	Nepetoidin B has anti-fungal, anti-bacterial, and antiinflammatory effects, it can inhibit LPS-stimulated NO production possibly via modulation of iNOS mediated by MKP-5/NF- κ B pathways in RAW 264.7 cells.
Targets(IC50)	NOS, NF- κ B, Antibacterial, Antifection, Antifungal, COX, IL Receptor, JNK, p38 MAPK, TNF
In vitro	Nepetoidin B (NTB) in this study, the anti-inflammatory effect of NTB was investigated in lipopolysaccharide (LPS)-stimulated RAW 264.7 macrophages. The cytotoxic effect of NTB and LPS was determined by MTT assay. The nitric oxide (NO) production was detected by the Griess assay. The TNF- α and IL-6 levels were determined by enzyme-linked immunosorbent assay kits. Protein expressions were tested by western blotting. The transcription activity of inducible nitric oxide synthase (iNOS) was detected by luciferase assay. An immunofluorescence assay was used to observe the visualization of NF- κ B/p65 nuclear translocation. NTB and LPS showed no obvious cytotoxic effect on RAW 264.7 cells. NTB remarkably inhibited LPS-induced NO and TNF- α secretion in a concentration-dependent manner while showing no significant effect on IL-6 secretion. NTB inhibited LPS-induced iNOS protein expression and transcription activity without affecting cyclooxygenase-2. Furthermore, NTB suppressed LPS-stimulated NF- κ B/p65 phosphorylation and nuclear translocation. In addition, NTB significantly inhibited LPS-induced phosphorylation of JNK1/2 and p38MAPK without affecting ERK1/2. LPS-induced inhibition of mitogen-activated protein kinase phosphatase-5 (MKP-5) was completely reversed by NTB. CONCLUSIONS: In conclusion, these results suggested that NTB inhibited LPS-stimulated NO production possibly via modulation of iNOS mediated by MKP-5/NF- κ B pathways in RAW 264.7 cells.[1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1818 mL	15.9089 mL	31.8177 mL
5 mM	0.6364 mL	3.1818 mL	6.3635 mL
10 mM	0.3182 mL	1.5909 mL	3.1818 mL
50 mM	0.0636 mL	0.3182 mL	0.6364 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

Wu X, et al. Nepetoidin B, a Natural Product, Inhibits LPS-stimulated Nitric Oxide Production via Modulation of iNOS Mediated by NF- κ B/MKP-5 Pathways. *Phytother Res.* 2017;31(7):1072-1077.

Falcao RA, et al. Antileishmanial Phenylpropanoids from the Leaves of *Hyptis pectinata* (L.) Poit. *Evid Based Complement Alternat Med.* 2013;2013:460613.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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