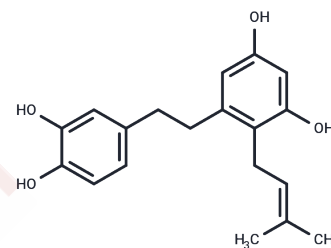


NPB-1575

Chemical Properties

CAS No. : 161984-54-9
 Formula: C₁₉H₂₂O₄
 Molecular Weight: 314.38
 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	NPB-1575 is a potent, orally active anti-inflammatory agent capable of crossing the blood-brain barrier. It mitigates neuroinflammation and resists ferroptosis by activating IRS2/Nrf2/NF-κB. NPB-1575 protects against cerebral ischemic injury and improves neurological function outcomes, making it suitable for research in focal ischemic stroke.
Targets(IC50)	Ferroptosis,Reductase,Nrf2,NO Synthase,FOXO
In vitro	NPB-1575 (1-10 μM, 2 h) activates Nrf2 through the IRS2/Akt signaling pathway and inhibits FOXO1, demonstrating significant in vitro anti-inflammatory effects in LPS-stimulated BV2 cells. Additionally, NPB-1575 (1-10 μM) reduces inflammatory responses in primary microglial cells by upregulating IRS2. In a co-culture model of primary neurons and microglial cells, NPB-1575 (1-10 μM) inhibits ferroptosis in ischemic stroke via IRS2 upregulation.
In vivo	NPB-1575 (25 mg/kg, administered orally, single dose post-surgery) alleviates neuroinflammation and counters ferroptosis during cerebral ischemia in pMCAO rats via IRS2.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1809 mL	15.9043 mL	31.8086 mL
5 mM	0.6362 mL	3.1809 mL	6.3617 mL
10 mM	0.3181 mL	1.5904 mL	3.1809 mL
50 mM	0.0636 mL	0.3181 mL	0.6362 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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