

GSK3-IN-3

Chemical Properties

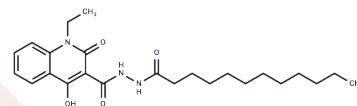
CAS No. : 331963-27-0

Formula: C₂₄H₃₅N₃O₄

Molecular Weight: 429.55

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	GSK3-IN-3 is a mitochondrial autophagy (mitophagy) inducer and GSK-3 inhibitor (IC ₅₀ : 3.01 μM) that induces parkin-dependent mitochondrial autophagy. GSK3-IN-3 is non-ATP and non-substrate competitive and neuroprotective against 6-OHDA.
Targets(IC ₅₀)	Mitophagy,GSK-3
In vitro	GSK3-IN-3 (VP07) (25 μM; 24 h) induces mitophagy in Parkin-expressing U2OS-iMLS cells, but with limited potency.[1] GSK3-IN-3 (1.56-25 μM; 24 h) causes mitochondrial fission and mitochondrial morphological changes in U2OS-iMLS-Parkin cells.[1] GSK3-IN-3 (VP0.7) (5 μM, 10 μM) showed neuroprotective effects against 6-OHDA in an in vitro cellular model of Parkinson's disease in SH-SY5Y cells.[2]

Solubility Information

Solubility	DMSO: 3.8 mg/mL (8.85 mM),Sonication and heating to 60°C are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.328 mL	11.6401 mL	23.2802 mL
5 mM	0.4656 mL	2.328 mL	4.656 mL
10 mM	0.2328 mL	1.164 mL	2.328 mL
50 mM	0.0466 mL	0.2328 mL	0.4656 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

Maestro I, et al. Phenotypic Assay Leads to Discovery of Mitophagy Inducers with Therapeutic Potential for Parkinson's Disease. ACS Chem Neurosci. 2021;12(24):4512-4523.

Morales-García JA, et al. Glycogen synthase kinase-3 inhibitors as potent therapeutic agents for the treatment of Parkinson disease. ACS Chem Neurosci. 2013;4(2):350-360.

Palomo V, et al. Exploring the binding sites of glycogen synthase kinase Identification and characterization of allosteric modulation cavities. J Med Chem. 2011;54(24):8461-8470.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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