

OB-1

## Chemical Properties

CAS No. : 300803-69-4

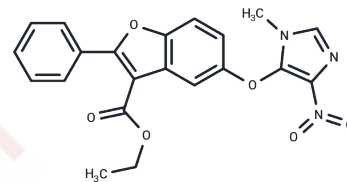
Formula: C<sub>21</sub>H<sub>17</sub>N<sub>3</sub>O<sub>6</sub>

Molecular Weight: 407.38

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	OB-1 is a protein-like protein-3 (STOML3) inhibitor, inhibiting adipogenesis and lipid droplet growth by downregulating the PPAR $\gamma$ pathway. OB-1 inhibits adipogenesis and lipid droplet growth by interfering with the self-association of stomatin.
Targets(IC50)	Others
In vitro	OB-1 (3 h) treatment reduced the mechanical conduction current of N2a cells with an IC50 of 10 nM. [1]
In vivo	OB-1 (250-500 pmol/ capsule, injected subcutaneously) reversibly reduces the sensitivity of mechanically gated currents in sensory neurons and silenced mechanoreceptors in mice. OB-1 (250 pmol/ capsule, subcutaneous injection) alleviates painful diabetic neuropathy in mice. [1]

## Solubility Information

Solubility	DMSO: 8 mg/mL (19.64 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	2.4547 mL	12.2736 mL	24.5471 mL
5 mM	0.4909 mL	2.4547 mL	4.9094 mL
10 mM	0.2455 mL	1.2274 mL	2.4547 mL
50 mM	0.0491 mL	0.2455 mL	0.4909 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

Wetzel C, et al. Small-molecule inhibition of STOML3 oligomerization reverses pathological mechanical hypersensitivity. *Nat Neurosci.* 2017 Feb;20(2):209-218.

Deroover L, et al. Wheat bran with reduced particle size increases serum SCFAs in obese subjects without improving health parameters compared with a maltodextrin placebo. *Am J Clin Nutr.* 2021 Oct 4;114(4):1328-1341.

Wu SC, et al. Stomatin modulates adipogenesis through the ERK pathway and regulates fatty acid uptake and lipid droplet growth. *Nat Commun.* 2022 Jul 19;13(1):4174.

Li X, et al. Onjisaponin B (OB) is Neuroprotective During Cognitive Loss Through Immune-mediated and SIRT1 Pathways. *Curr Neurovasc Res.* 2018;15(2):94-102.

Kraus A, et al. Olfactory detection of viruses shapes brain immunity and behavior in zebrafish. *bioRxiv [Preprint].* 2023 Mar 30:2023.03.17.533129.

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