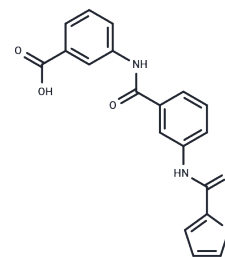


CZL80

Chemical Properties

CAS No. : 313482-91-6
Formula: C₁₉H₁₄N₂O₄S
Molecular Weight: 366.39
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	CZL80 is a brain-penetrant caspase-1 inhibitor with an IC ₅₀ of 0.01 μM that is used to study febrile seizures and subsequent epileptogenic susceptibility. CZL80 reduces neuronal excitability, decreases the incidence of febrile seizure generation at 7.5 mg/kg intravenously, and mitigates long-term neurological dysfunction following photothrombosis, establishing CZL80 as a valuable tool for neuroinflammation, seizure biology, and stroke-induced pathology.
Targets(IC ₅₀)	Caspase
In vivo	CZL80 (10, 30 mg/kg/day, intraperitoneal injection, for 7 days) ameliorated motor dysfunction in C57BL/6 mice and Caspase-1 ^{-/-} mice after photothrombotic stroke [2]. CZL80 (0.0075, 0.075, 0.75, and 7.5 mg/kg, intravenous injection, administered every other day) reduced epileptic seizure incidence in a dose-dependent manner, prolonged epileptic seizure latency, and increased the induction threshold of high-grade fever febrile convulsions in Casp1 ^{-/-} mice [1].

Solubility Information

Solubility	DMSO: ≥ 160 mg/mL, 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	2.7293 mL	13.6467 mL	27.2933 mL
5 mM	0.5459 mL	2.7293 mL	5.4587 mL
10 mM	0.2729 mL	1.3647 mL	2.7293 mL
50 mM	0.0546 mL	0.2729 mL	0.5459 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

Yangshun Tang, et al. Structure-based discovery of CZL80, a caspase-1 inhibitor with therapeutic potential for febrile seizures and later enhanced epileptogenic susceptibility. *Br J Pharmacol.* 2020 Aug;177(15):3519-3534.
Ling Pan, et al. Novel Caspase-1 inhibitor CZL80 improves neurological function in mice after progressive ischemic stroke within a long therapeutic time-window. *Acta Pharmacol Sin.* 2022 Nov;43(11):2817-2827.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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