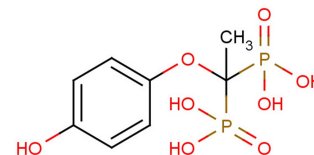


L-690330

Chemical Properties

CAS No.:	142523-38-4
Formula:	C ₈ H ₁₂ O ₈ P ₂
Molecular Weight:	298.12
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	L-690330 is a competitive inositol monophosphatase inhibitor (K _i : 0.27 and 0.19 μM for recombinant human and bovine IMPase, 0.30 and 0.42 μM for human and bovine frontal cortex IMPase). L-690330 shows 10-fold more sensitive than a mouse and rat IMPase.
Targets(IC ₅₀)	Recombinant human IMPase: (k _i)0.27 μM Recombinant bovine IMPase: 0.19 μM(k _i) Human frontal cortex IMPase: 0.30 μM(k _i) Bovine frontal cortex IMPase: 0.42 μM
In vitro	In HEK293 cells, L-690330 (50 μM; 1 hour) causes P-AMPK and autophagy and increases LC3-I/II and p-AMPK expression [2].
In vivo	Except for a reduction in time spent in light in the dark/light test, L-690330 (intracerebroventricular injection; 0.1 μmol) shows no effects on their motor activity and coordination in the beam walking [3].

Solubility Information

Solubility	H ₂ O: 33.33 mg/mL (111.80 mM) DMSO: 25 mg/mL (83.86 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.354 mL	16.772 mL	33.544 mL
5 mM	0.671 mL	3.354 mL	6.709 mL
10 mM	0.335 mL	1.677 mL	3.354 mL
50 mM	0.067 mL	0.335 mL	0.671 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Atack JR, et al. In vitro and in vivo inhibition of inositol monophosphatase by the bisphosphonate L-690,330. J Neurochem. 1993 Feb;60(2):652-8.
2. Cárdenas C, et al. Essential regulation of cell bioenergetics by constitutive InsP3 receptor Ca²⁺ transfer to mitochondria. Cell. 2010 Jul 23;142(2):270-83.
3. Shtein L, et al. The inositol monophosphatase inhibitor L-690,330 affects pilocarpine-behavior and the forced swim test. Psychopharmacology (Berl). 2013 Jun;227(3):503-8.

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