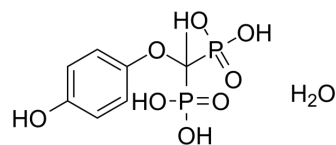


## L-690330 hydrate

Cat. No.:	HY-101075A
Molecular Formula:	C <sub>8</sub> H <sub>14</sub> O <sub>9</sub> P <sub>2</sub>
Molecular Weight:	316.14
Target:	Phosphatase
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 31 mg/mL (98.06 mM; Need ultrasonic and warming)  
H<sub>2</sub>O : 31 mg/mL (98.06 mM; Need ultrasonic and warming)

Concentration	Solvent	Mass	1 mg	5 mg	10 mg
			1 mg	5 mg	10 mg
1 mM			3.1632 mL	15.8158 mL	31.6316 mL
5 mM			0.6326 mL	3.1632 mL	6.3263 mL
10 mM			0.3163 mL	1.5816 mL	3.1632 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

L-690330 hydrate is a competitive inhibitor of inositol monophosphatase (IMPase) with K<sub>i</sub>s of 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, respectively. L-690330 hydrate exhibits 10-fold more sensitive than mouse and rat IMPase<sup>[1]</sup>.

#### In Vitro

L-690330 hydrate (50 μM; 1 hour) induces P-AMPK and autophagy and increases LC3-I/II and p-AMPK expression in HEK293 cells<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

L-690330 hydrate (intracerebroventricular injection; 0.1 μmol) has no effects on their motor activity and coordination in the beam walking, except a reduction in time spent in light in the dark/light test<sup>[3]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model: Eight-week-old male ICR mice<sup>[3]</sup>

Dosage: 0.1 μmol

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Administration:	Intracerebroventricular injection
Result:	Did not effect mice well-being by i.c.v injection.

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## REFERENCES

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- [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 Ca<sup>2+</sup> 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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**Caution: Product has not been fully validated for medical applications. For research use only.**

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