

Product Name: L-690,330

Catalog No.: 0681

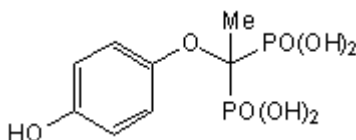
Batch No.: 2

CAS Number: 142523-38-4

IUPAC Name: [1-(4-Hydroxyphenoxy)ethylidene]bisphosphonic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_8H_{12}O_8P_2 \cdot H_2O$
Batch Molecular Weight: 316.15
Physical Appearance: Off-white solid
Solubility: water to 100 mM with gentle warming
 phosphate buffered saline to 100 mM with gentle warming
 ethanol to 50 mM with gentle warming
 DMSO to 100 mM with gentle warming
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: $R_f = 0.2$ (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])
HPLC: Shows >98.9% purity
¹H NMR: Consistent with structure
 Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	30.39	4.46	
Found	30.48	4.47	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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CAS Number: 142523-38-4

IUPAC Name: [1-(4-Hydroxyphenoxy)ethylidene]bisphosphonic acid

Description:

A potent inhibitor of inositol monophosphatase; stable to hydrolysis. Induces autophagy in COS-7 cells independently of mTOR inhibition.

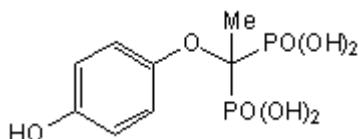
Physical and Chemical Properties:

Batch Molecular Formula: C₈H₁₂O₈P₂·H₂O

Batch Molecular Weight: 316.15

Physical Appearance: Off-white solid

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

water to 100 mM with gentle warming
phosphate buffered saline to 100 mM with gentle warming
ethanol to 50 mM with gentle warming
DMSO to 100 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Atack et al (1993) *In vitro* and *in vivo* inhibition of inositol monophosphatase by the bisphosphonate L-690,330. *J.Neurochem.* **60** 652. PMID: 8380439.

Atack et al (1994) Effects of L-690,488, a pro-drug of the bisphosphonate inositol monophosphatase inhibitor L-690,330, on phosphatidylinositol cycle markers. *J.Pharmacol.Exp.Ther.* **270** 70. PMID: 8035344.

Sarkar et al (2005) Lithium induces autophagy by inhibiting inositol monophosphatase. *J.Cell.Biol.* **170** 1101. PMID: 16186256.

Fleming et al (2011) Chemical modulators of autophagy as biological probes and potential therapeutics. *Nat.Chem.Biol.* **7** 9. PMID: 21164513.

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