

Certificate of Analysis

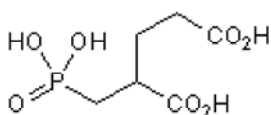
www.tocris.com

Product Name: PMPA (NAALADase inhibitor)
CAS Number: 173039-10-6
IUPAC Name: 2-(Phosphonomethyl)pentane-1,5-dioic acid

Catalog No.: 1380 **Batch No.:** 3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆H₁₁O₇P
Batch Molecular Weight: 226.12
Physical Appearance: White solid
Solubility: water to 100 mM
Storage: Desiccate at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	31.87	4.9	
Found	31.91	4.91	

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

bio-techne.com
 info@bio-techne.com
 techsupport@bio-techne.com

North America
 Tel: (800) 343 7475

China
 info.cn@bio-techne.com
 Tel: +86 (21) 52380373

Europe Middle East Africa
 Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
 Tel:+1 612 379 2956

Product Name: PMPA (NAALADase inhibitor)

Catalog No.: 1380

Batch No.: 3

CAS Number: 173039-10-6

IUPAC Name: 2-(Phosphonomethyl)pentane-1,5-dioic acid

Description:

Highly potent and selective inhibitor of glutamate carboxypeptidase 2 (GCP II/N-acetylated α -linked dipeptidase/NAALADase) with a K_i value of 275 pM. Neuroprotective; protects against glutamate-mediated motor neuron degeneration and reduces volume of injury following middle cerebral artery occlusion (MCAO).

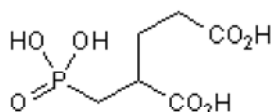
Physical and Chemical Properties:

Batch Molecular Formula: C₆H₁₁O₇P

Batch Molecular Weight: 226.12

Physical Appearance: White solid

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM

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.

Licensing Information:

Sold with the permission of AstraZeneca Ltd.

References:

Rahn *et al* (2012) Inhibition of glutamate carboxypeptidase II (GCP II) activity as a treatment for cognitive impairment in multiple sclerosis. *Proc.Natl.Acad.Sci.U S A* (Epub ahead of print]. PMID: 23169655.

Thomas *et al* (2003) NAALADase inhibition protects motor neurons against chronic glutamate toxicity. *Eur.J.Pharmacol.* **471** 177. PMID: 12826236.

Slusher *et al* (1999) Selective inhibition of NAALADase, which converts NAAG to glutamate, reduces ischemic brain injury. *Nat.Med.* **5** 1396. PMID: 10581082.

Jackson *et al* (1996) Design, synthesis, and biological activity of a potent inhibitor of the neuropeptidase N-acetylated α -linked acidic dipeptidase. *J.Med.Chem.* **39** 619. PMID: 8558536.

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

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956