

Certificate of Analysis

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Product Name: (±)-*threo*-3-Methylglutamic acid

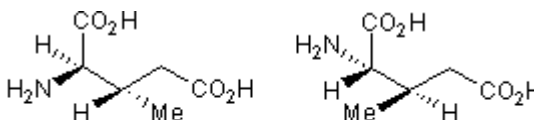
Catalog No.: 0811

Batch No.: 6

CAS Number: 63088-04-0

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆H₁₁NO₄
Batch Molecular Weight: 161.16
Physical Appearance: White crystalline powder
Solubility: 1eq. NaOH to 100 mM
Storage: Store at RT
Batch Molecular Structure:



(1:1 mixture of enantiomers)

2. ANALYTICAL DATA

TLC: R_f = 0.24 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])
Melting Point: Between 167 - 169°C
HPLC: Shows >99.5% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

Carbon Hydrogen Nitrogen

Theoretical	44.72	6.88	8.69
Found	44.66	6.89	8.61

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

Product Information

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Product Name: (±)-*threo*-3-Methylglutamic acid

Catalog No.: 0811

Batch No.: 6

CAS Number: 63088-04-0

Description:

A potent blocker of glutamate transport; selective for EAAT2 and EAAT4 (IC₅₀ values are 90, 109, 1600 and 1080 µM for EAAT2, EAAT4, EAAT1 and EAAT3 respectively).

Physical and Chemical Properties:

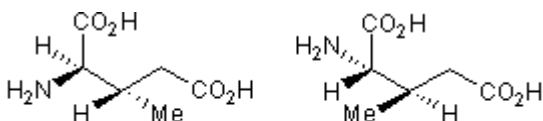
Batch Molecular Formula: C₆H₁₁NO₄

Batch Molecular Weight: 161.16

Physical Appearance: White crystalline powder

Minimum Purity: >98%

Batch Molecular Structure:



(1:1 mixture of enantiomers)

Storage: Store at RT

Solubility & Usage Info:

1eq. NaOH 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.

References:

Vandenberg *et al* (1997) Contrasting modes of action of methylglutamate derivatives on the excitatory amino acid transporters, EAAT1 and EAAT2. *Mol.Pharmacol.* **51** 809. PMID: 9145919.

Mitrovic *et al* (1998) Identification of functional domains of the human glutamate transporters EAAT1 and EAAT2. *J.Biol.Chem.* **273** 14698. PMID: 9614067.

Eliasof *et al* (2001) Pharmacological characterization of *threo*-3-methylglutamic acid with excitatory amino acid transporters in native and recombinant systems. *J.Neurochem.* **77** 550. PMID: 11299317.

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