

Product Name: IEM 1460

Catalog No.: 1636

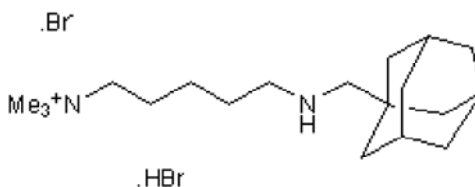
Batch No.: 3

CAS Number: 121034-89-7

IUPAC Name: *N,N,H,-*Trimethyl-5-[(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)amino]-1-pentanaminiumbromide hydrobromide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₉H₃₇N₂Br.HBr.2½H₂O
Batch Molecular Weight: 499.37
Physical Appearance: White solid
Solubility: water to 100 mM
 phosphate buffered saline to 100 mM
 DMSO to 100 mM
Storage: Desiccate at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.19 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])
HPLC: Shows 98.7% purity
¹H NMR: Consistent with structure
 Mass Spectrum: Consistent with structure
 Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	45.7	8.68	5.61
Found	45.67	8.49	6.01

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

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Description:

Voltage-dependent open-channel blocker of AMPA receptors. Selective for GluR2 subunit-lacking (Ca²⁺-permeable) receptors over GluA2-containing receptors (IC₅₀ values are 2.6 and 1102 μM, respectively). Selectively blocks fast spiking interneuron but not medium spiny projection neuron in mouse striatum. Also blocks NMDA receptor-mediated currents. Anticonvulsant in vivo.

Physical and Chemical Properties:

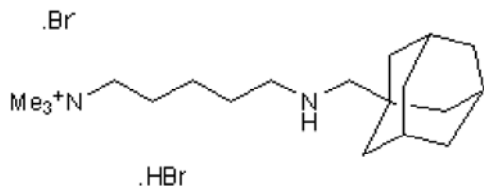
Batch Molecular Formula: C₁₉H₃₇N₂Br.HBr.2½H₂O

Batch Molecular Weight: 499.37

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM
phosphate buffered saline to 100 mM
DMSO 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:

Gittis *et al* (2012) Selective inhibition of striatal fast-spiking interneurons causes dyskinesias. *J.Neurosci.* **31** 15727. PMID: 22049415.

Schlesinger *et al* (2005) Two mechanisms of action of the adamantane derivative IEM-1460 at human AMPA-type glutamate receptors. *Br.J.Pharmacol.* **145** 656. PMID: 15834439.

Buldakova *et al* (1999) Characterization of AMPA receptor populations in rat brain cells by the use of subunit-specific open channel blocking drug, IEM-1460. *Brain Res.* **846** 52. PMID: 10536213.

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