**Product overview**

**Name**
IEM-1460

**Cat No**
HB0338

**Short description**
Competitive, selective, GluA2 (GluR2)-lacking AMPA receptor blocker

**Biological description**
Competitive, selective, voltage-dependent open-channel Ca\(^{2+}\) permeable GluA2 (GluR2)-lacking AMPA receptor blocker (IC\(_{50}\) values are 2.6 and 1102 µM at GluA2-lacking and GluA2-containing AMPARs respectively).

IEM-1460 can be utilized as an indicator of the distribution of AMPA receptor subtypes among populations of brain cells.

IEM-1460 can also be used to selectively target GABAergic interneurons, as several subpopulations of these neurons express a significant proportion of GluA2-lacking Ca\(^{2+}\)-permeable AMPARs.

Blocks synaptic excitation of fast-spiking interneurons and blocks NMDAR-mediated currents.

**Biological action**
Blocker

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**Properties**

**Chemical name**
\(N,N,N\)-Trimethyl-5-\((\text{tricyclo}[3.3.1.1^{3,7}]\text{dec}-1\text{-ylmethyl})\text{amino}\)\)-1-pentanaminium bromide hydrobromide

**Molecular Weight**
454.33

**Chemical structure**
![Chemical structure image]

**Molecular Formula**
\(C_{19}H_{37}BrN_{2}\cdot HBr\)

**CAS Number**
121034-89-7

**SMILES**
\([\text{Br-}]\cdot \text{Br} \cdot \text{C}([\text{N+}]\text{(C)}\text{(C)}\text{CCCCCNCC13CC2CC(CC(C)(C2)C3})\]

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**Storing and Using Your Product**

**Storage instructions**
Room temperature (desiccate)

**Solubility overview**
soluble in water (100mM) or DMSO (100mM)

**Important**
This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

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**References for IEM-1460**
The open channel blocking drug, IEM-1460, reveals functionally distinct alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionate receptors in rat brain neurons.


PubMedID: 10613516

Characterization of AMPA receptor populations in rat brain cells by the use of subunit-specific open channel blocking drug, IEM-1460.


PubMedID: 10536213

Two mechanisms of action of the adamantane derivative IEM-1460 at human AMPA-type glutamate receptors.


PubMedID: 15834439

Selective inhibition of striatal fast-spiking interneurons causes dyskinesias.


PubMedID: 22049415