Certificate of Analysis

Product Name: **IEM 1925 dihydrobromide** **Catalog No.: 4198** **Batch No.: 1**

CAS Number: 258282-23-4

IUPAC Name: *N*-(1-Phenylcyclohexyl)-1,5-pentanediamine dihydrobromide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{17}H_{28}N_2.2HBr.½H_2O$

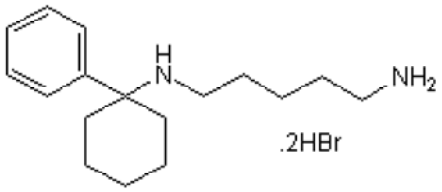
Batch Molecular Weight: 431.25

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 50 mM

Storage: Desiccate at RT

Batch Molecular Structure:



$C_{17}H_{30}Br_2N_2$
Mol. Wt.: 422.24

2. ANALYTICAL DATA

TLC: R_f = 0.15 (Dichloromethane:Methanol:Ammonia soln. [79:20.1])

HPLC: Shows 96.4% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	47.35	7.25	6.5
Found	47.47	7.25	6.7

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Description:

IEM 1925 dihydrobromide is a voltage- and use-dependent open-channel antagonist of AMPA receptors. Selective between subtypes; blocks GluA2 subunit-lacking receptors more potently than GluA2-containing receptors (K_D for GluA2-containing AMPAR is 210 times higher at -80 mV). More potent than IEM 1460 (Cat. No. 1636) and IEM 1754 due to a slower unblocking rate. Alleviates inflammatory pain in a rat model of peripheral inflammation.

Physical and Chemical Properties:

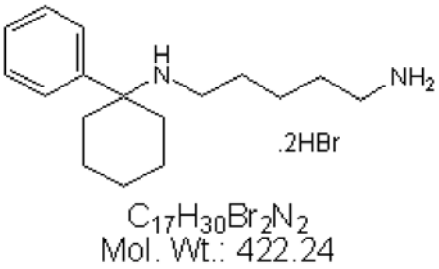
Batch Molecular Formula: $C_{17}H_{28}N_2.2HBr.½H_2O$

Batch Molecular Weight: 431.25

Physical Appearance: White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



$C_{17}H_{30}Br_2N_2$
Mol. Wt.: 422.24

Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM
DMSO to 50 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival.

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:

Kopach *et al* (2016) Inhibition of spinal Ca^{2+}-permeable AMPA receptors with dicationic compounds alleviates persistent inflammatory pain without adverse effects. Front.Cell Neurosci. ***10***. PMID: 26973464.

Tikhonov *et al* (2000) Voltage-dependent block of native AMPA receptor channels by dicationic compounds. Br.J.Pharmacol. ***129*** 265. PMID: 10694232.