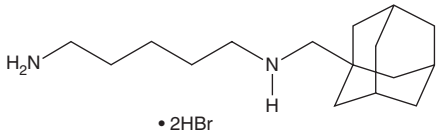
PRODUCT INFORMATION

IEM 1754

Item No. 31192

CAS Registry No.: 162831-31-4
Formal Name: N^1-(tricyclo[3.3.1.$1^{3,7}$]dec-1-ylmethyl)-1,5-pentanediamine, dihydrobromide
MF: $C_{16}H_{30}N_2 \bullet 2HBr$
FW: 412.3
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

IEM 1754 is supplied as a solid. A stock solution may be made by dissolving the IEM 1754 in the solvent of choice, which should be purged with an inert gas. IEM 1754 is slightly soluble (0.1-1 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of IEM 1754 can be prepared by directly dissolving the solid in aqueous buffers. IEM 1754 is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

IEM 1754 is an AMPA receptor antagonist.[1] It inhibits inward currents in whole-cell patch-clamp assays using *X. laevis* oocytes (IC_{50} = 6 µM). IEM 1754 (0.5 or 3 mg/kg) inhibits kainate-induced tonic-clonic seizures and reduces mortality in mice.[2] It increases movement activity but does not reduce freezing time in a mouse model of centrifugation-induced dyskinesia when administered at a dose of 5 mg/kg.[3]

References

1. Magazanik, L.G., Buldakova, S.L., Samoilova, M.V., *et al*. Block of open channels of recombinant AMPA receptors and native AMPA/kainate receptors by adamantane derivatives. *J. Physiol.* **505(Pt 3)**, 655-663 (1997).
2. Serdyuk, S.E. and Gmiro, V.E. Combined blockade of α3β4 nicotinic acetylcholine receptors and GluR1 AMPA receptors in rats prevents kainate-induced tonic-clonic seizures. *Bull. Exp. Biol. Med.* **143(5)**, 611-613 (2007).
3. Lukomskaya, N.Y., Zhabko, E.P., and Gmiro, V.E. The involvement of glutamatergic transmission in the mechanism of movement disorders induced by reversive rotation of white mice. *Neurosci. Behav. Physiol.* **30(5)**, 543-546 (2000).

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