

Product data sheet



MedKoo Cat#: 573551 Name: Methimepip dihydrobromide CAS: 151070-80-3 Chemical Formula: C ₁₀ H ₁₉ Br ₂ N ₃ Exact Mass: 338.9946 Molecular Weight: 341.091	 H-Br H-Br
Product supplied as: Powder	
Purity (by HPLC): ≥ 98%	
Shipping conditions: Ambient temperature	
Storage conditions: Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

Methimepip dihydrobromide is a histamine agonist which is highly selective for the H₃ subtype. It is the N-methyl derivative of immepip.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.93 mL	14.66 mL	29.32 mL
5 mM	0.59 mL	2.93 mL	5.86 mL
10 mM	0.29 mL	1.47 mL	2.93 mL
50 mM	0.06 mL	0.29 mL	0.59 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Dandekar RD, Khan MM. Regulation of ERK2 phosphorylation by histamine in splenocytes. *Immunopharmacol Immunotoxicol.* 2011 Jun;33(2):250-8. doi: 10.3109/08923973.2010.499913. PMID: 21554104.
- Kitbunnadaj R, Hashimoto T, Poli E, Zuiderveld OP, Menozzi A, Hidaka R, de Esch IJ, Bakker RA, Menge WM, Yamatodani A, Coruzzi G, Timmerman H, Leurs R. N-substituted piperidinyll alkyl imidazoles: discovery of methimepip as a potent and selective histamine H₃ receptor agonist. *J Med Chem.* 2005 Mar 24;48(6):2100-7. doi: 10.1021/jm049475h. PMID: 15771452.

In vivo study

- Varaschin RK, Rosenberg MJ, Hamilton DA, Savage DD. Differential effects of the histamine H₃ receptor agonist methimepip on dentate granule cell excitability, paired-pulse plasticity and long-term potentiation in prenatal alcohol-exposed rats. *Alcohol Clin Exp Res.* 2014 Jul;38(7):1902-11. doi: 10.1111/acer.12430. Epub 2014 May 12. PMID: 24818819; PMCID: PMC5094461.
- Abuhamdah RM, van Rensburg R, Lethbridge NL, Ennaceur A, Chazot PL. Effects of methimepip and JNJ-5207852 in Wistar rats exposed to an open-field with and without object and in Balb/c mice exposed to a radial-arm maze. *Front Syst Neurosci.* 2012 Jul 16;6:54. doi: 10.3389/fnsys.2012.00054. PMID: 22811660; PMCID: PMC3397409.

7. Bioactivity

Biological target:

Methimepip dihydrobromide is a histamine agonist which is highly selective for the H₃ subtype.

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In vitro activity

This study observed that N-methyl-substituted imnepip (methimepip) exhibits high affinity and agonist activity at the human histamine H(3) receptor ($pK(i) = 9.0$ and $pEC(50) = 9.5$) with a 2000-fold selectivity at the human H(3) receptor over the human H(4) receptor and more than a 10000-fold selectivity over the human histamine H(1) and H(2) receptors.

Reference: J Med Chem. 2005 Mar 24;48(6):2100-7. <https://pubmed.ncbi.nlm.nih.gov/15771452/>

In vivo activity

To further investigate this mechanism, this study examined the effect of methimepip, a selective histamine H3 receptor agonist, on DG (dentate gyrus) granule cell responses and LTP (long-term potentiation) in saccharin control and PAE (prenatal alcohol-exposed) rats. In control offspring, methimepip reduced the coupling of fast excitatory postsynaptic field potentials to population spikes (E-S coupling), the probability of glutamate release, as measured by paired-pulse ratio (PPR) and diminished DG LTP.

Reference: Alcohol Clin Exp Res. 2014 Jul;38(7):1902-11. <https://pubmed.ncbi.nlm.nih.gov/24818819/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.