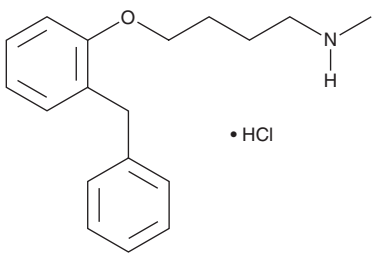
PRODUCT INFORMATION

Bifemelane (hydrochloride)

Item No. 43732

CAS Registry No.:	62232-46-6
Formal Name:	N-methyl-4-[2-(phenylmethyl)phenoxy]-1-butanamine, monohydrochloride
Synonyms:	4-(O-Benzylphenoxy)-N-methylbutylamine, BP-N-Methylbutylamine, MCI-2016
MF:	$C_{18}H_{23}NO \bullet HCl$
FW:	305.8
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

Bifemelane (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the bifemelane (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Bifemelane (hydrochloride) is sparingly soluble (1-10 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 bifemelane (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. Bifemelane (hydrochloride) 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

Bifemelane is an inhibitor of monoamine oxidase A (MAO-A; K_i = 4.2 µM).[1] It is selective for MAO-A over MAO-B (K_i = 46 µM). Bifemelane (15 mg/kg, p.o.) protects against ischemia-induced decreases in frontal cortex, hippocampus, and striatum levels of muscarinic acetylcholine receptors (mAChRs) in a rat model of chronic cerebral hypoperfusion induced by permanent bilateral carotid artery occlusion.[2] It also increases survival and brain norepinephrine, dopamine, and serotonin (5-HT) levels in a gerbil model of cerebral ischemia induced by bilateral carotid artery ligation when administered at a dose of 25 mg/kg.[3] Bifemelane (30 mg/kg, i.p.) prevents memory deficits induced by scopolamine (Item No. 40307) in the passive avoidance test in rats.[4] It decreases immobility time in the forced swim test in rats.[5] Formulations containing bifemelane have been used in the treatment of depression in patients with cerebral infarction or senile dementia.

References

1. Naoi, M., Nomura, Y., Ishiki, R., *et al. J. Neurochem.* **50(1)**, 243-247 (1988).
2. Kondo, Y., Ogawa, N., Asanuma, M., *et al. Neurosci. Res.* **24(4)**, 409-414 (1996).
3. Egawa, M., Mitsuka, M., Umezu, K., *et al. Jpn. J. Pharmacol.* **34(3)**, 363-365 (1984).
4. Tobe, A., Yamaguchi, T., Nagai, R., *et al. Jpn. J. Pharmacol.* **39(2)**, 153-161 (1985).
5. Moryl, E., Danysz, W., and Quack, G. *Pharmacol. Toxicol.* **72(6)**, 394-397 (1993).

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