Product Information

Bupropion (hydrochloride)
Item No. 10488

CAS Registry No.: 31677-93-7
Formal Name: 1-(3-chlorophenyl)-2-[(1,1-dimethylethyl)amino]-1-propane, monohydrochloride
Synonym: NSC 315851
MF: C_{18}H_{18}ClNO • HCl
FW: 276.2
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures

For long term storage, we suggest that bupropion (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

Bupropion (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the bupropion (hydrochloride) in the solvent of choice. Bupropion (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of bupropion (hydrochloride) in these solvents is approximately 10 mg/ml in ethanol and DMSO and approximately 5 mg/ml in DMF.

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 bupropion (hydrochloride) can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of bupropion (hydrochloride) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Bupropion is an inhibitor of the reuptake of dopamine and norepinephrine (IC_{50} = 6.5 and 3.4 μM, respectively). It is also an antagonist of neuronal acetylcholine nicotinic receptors (nAChR), blocking α_4β_2 better than α_3β_2 and α_7 (IC_{50} = 1.3, 8, and 60 μM, respectively). As a dual inhibitor of dopamine and norepinephrine reuptake, bupropion is efficacious as an antidepressant. Because of its effects on nicotinic receptors, it is also used to promote smoking cessation.

References

Related Products
Hydroxy Bupropion-d_3 - Item No. 10010669 • Bupropion-d_4 (hydrochloride) - Item No. 10010679

WARNING: This product is for laboratory research only; not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

Material Safety Data

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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