

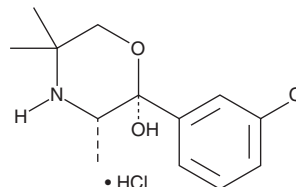
PRODUCT INFORMATION



S,S-hydroxy Bupropion (hydrochloride)

Item No. 35718

CAS Registry No.: 106083-71-0
Formal Name: (2S,3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol, monohydrochloride
Synonyms: BUPOH, BW 306U, GW 353162A, Radafaxine
MF: C₁₃H₁₈ClNO₂ • HCl
FW: 292.2
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

S,S-hydroxy Bupropion (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the S,S-hydroxy bupropion (hydrochloride) in the solvent of choice, which should be purged with an inert gas. S,S-Hydroxy bupropion (hydrochloride) is soluble in DMSO.

Description

S,S-hydroxy Bupropion is an active metabolite of the antidepressant bupropion.^{1,2} It is formed from bupropion by the cytochrome P450 (CYP) isoform CYP2B6.³ S,S-hydroxy Bupropion inhibits dopamine and norepinephrine but not serotonin (5-HT) reuptake in HEK293 cells expressing the human transporters (IC₅₀s = 0.63, 0.241, and >100 μM, respectively).¹ It is also an antagonist of α3β4-, α4β2-, α4β4-, and α1β1 subunit-containing nicotinic acetylcholine receptors (nAChRs; IC₅₀s = 11, 3.3, 30, and 28 μM, respectively). S,S-hydroxy Bupropion inhibits nicotine-induced analgesia in the tail-flick and hot plate tests, hyperlocomotion, and hypothermia in mice (ED₅₀s = 0.2, 1, 0.9, and 1.5 mg/kg, respectively). It substitutes for (+)-amphetamine in rats in a two-lever drug discrimination test (ED₅₀ = 4.4 mg/kg).²

References

1. Lukas, R.J., Muresan, A.Z., Damaj, M.I., *et al.* Synthesis and characterization of *in vitro* and *in vivo* profiles of hydroxybupropion analogues: Aids to smoking cessation. *J. Med. Chem.* **53**(12), 4731-4748 (2010).
2. Bondarev, M.L., Bondareva, T.S., Young, R., *et al.* Behavioral and biochemical investigations of bupropion metabolites. *Eur. J. Pharmacol.* **474**(1), 85-93 (2003).
3. Coles, R. and Kharasch, E.D. Stereoselective metabolism of bupropion by cytochrome P4502B6 (CYP2B6) and human liver microsomes. *Pharm. Res.* **25**(6), 1405-1411 (2008).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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