

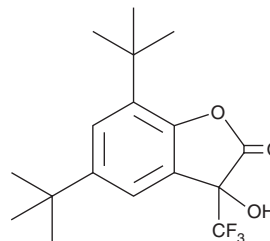
PRODUCT INFORMATION



(R,S)-BHFF

Item No. 25535

CAS Registry No.: 123557-91-5
Formal Name: 5,7-bis(1,1-dimethylethyl)-3-hydroxy-3-(trifluoromethyl)-2(3H)-benzofuranone
Synonym: *rac*-BHFF
MF: C₁₇H₂₁F₃O₃
FW: 330.3
Purity: ≥95%
UV/Vis.: λ_{max}: 285 nm
Supplied as: A crystalline 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

(R,S)-BHFF is supplied as a crystalline solid. A stock solution may be made by dissolving the (R,S)-BHFF in the solvent of choice, which should be purged with an inert gas. (R,S)-BHFF is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (R,S)-BHFF in these solvents is approximately 30 mg/ml.

(R,S)-BHFF is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (R,S)-BHFF should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. (R,S)-BHFF has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(R,S)-BHFF is a positive allosteric modulator of GABA_B receptors that increases the potency of GABA by 15.3-fold in a GTPγ[³⁵S] binding assay when used at a concentration of 0.3 μM.¹ It is selective for GABA_B over a panel of receptors and ion channels at 10 μM, however, it inhibits the cholecystokinin-1 (CCK_A) receptor (IC₅₀ = 4.1 μM). (R,S)-BHFF enhances inhibition of the population spike of CA1 pyramidal cells induced by the GABA_B receptor antagonist baclofen (Item No. 18600) in rat hippocampal slices. *In vivo*, (R,S)-BHFF increases the baclofen-induced loss of righting reflex and reverses stress-induced hyperthermia in mice. (R,S)-BHFF (50, 100, and 200 mg/kg) reduces the number of lever responses to alcohol by 30, 65, and 90%, respectively, and increases latency to the first response on the alcohol lever in Sardinian alcohol preferring (sP) rats when administered pre-conditioning at a dose of 200 mg/kg.²

References

1. Malherbe, P., Masciardi, R., Norcross, R.D., *et al.* Characterization of (R,S)-5,7-di-*tert*-butyl-3-hydroxy-3-trifluoromethyl-3H-benzofuran-2-one as a positive allosteric modulator of GABA_B receptors. *Br. J. Pharmacol.* **154**(4), 797-811 (2008).
2. Maccioni, P., Thomas, A.W., Carai, M.A., *et al.* The positive allosteric modulator of the GABA_B receptor, *rac*-BHFF, suppresses alcohol self-administration. *Drug Alcohol Depend.* **109**(1-3), 96-103 (2010).

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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