Product Data Sheet

Product Name: BTS 54-505 hydrochloride
Cat. No.: GC11384

Chemical Properties

Cas. No.	84484-78-6		
Chemical Name	(R)-1-(1-(4-chlorophenyl)cyclobutyl)-3-methylbutan-1-amine hydrochloride		
SMILES	ClC1=CC=C(C=C1)C2([C@@H](CC(C)C)N)CCC2.Cl		
Formula	$C_{15}H_{22}NCl.HCl$	M.Wt	288.26
Solubility	<28.83mg/ml in DMSO; <14.41mg/ml in Water	Storage	Desiccate at RT
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	BTS 54-505 hydrochloride		

Background

IC50: 0.066 μM for noradrenaline uptake; 5.1 μM for 5-HT uptake; 0.31 μM for dopamine uptake

Sibutramine HCl (BTS 54-524) is an inhibitor of the reuptake of monoamines with a pharmacological profile in rodents indicative of non-tricyclic putative antidepressant activity. BTS 54-505 is the primary amine metabolite of sibutramine.

In vitro: Simultaneous application of BTS 54-505 with 5-HT resulted in a prolongation of the recovery time from the 5-HT-mediated suppression of discharge activity. BTS 54-505 also prolonged the recovery time from a NA-mediated potentiation of firing. These effects on recovery time are attributed to the inhibition of uptake of both 5-HT and NA by BTS 54-505. The amplitude of the response to 5-HT or NA was unaffected by co-ejection of BTS 54-505 [1].

In vivo: The secondary (BTS 54-354) and primary (BTS 54-505) amine metabolites of

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sibutramine HCl exhibit similar in vivo pharmacological activity to the parent compound. Thus, each compound displays potent activity in acute behavioural models predictive of antidepressant effects and a comparable ability to inhibit the uptake of monoamines [2].

Clinical trial: Up to now, BTS 54-505 is still in the preclinical development stage.

Reference:
[1] Scott G, Luscombe GP, Mason R. The effects of BTS 54-505, a metabolite of sibutramine, on monoamine and excitatory amino acid-evoked responses in the rat dorsolateral geniculate nucleus in vivo. Br J Pharmacol. 1994 Jan;111(1):97-102.
[2] Luscombe GP, Hopcroft RH, Thomas PC, Buckett WR. The contribution of metabolites to the rapid and potent down-regulation of rat cortical beta-adrenoceptors by the putative antidepressant sibutramine hydrochloride. Neuropharmacology. 1989 Feb;28(2):129-34.

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