Product Data Sheet

Product Name: BP 554 maleate
Cat. No.: GC15311

Chemical Properties

Cas. No.	82900-57-0		
Chemical Name	1-(3-(benzo[d][1,3]dioxol-5-yloxy)propyl)-4-phenylpiperazine maleate		
SMILES	O=C(O)/C([H])=C([H])\C(O)=O.C1(N2CCN(CC2)CCCOC3=CC4=C(OCO4)C=C3)=CC=CC=C1		
Formula	$C_{20}H_{24}N_2O_3.C_4H_4O_4$	M.Wt	456.48
Solubility	<45.65mg/ml in DMSO	Storage	Store 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	BP 554 maleate		

Background

BP-554 maleate is a selective agonist of 5-HT1A receptor [1].

The 5-HT1A receptor is a G protein-coupled receptor for endogenous neurotransmitter serotonin (5-HT) and mediates inhibitory neurotransmission.

BP-554 maleate is a selective 5-HT1A receptor agonist. BP-554 showed higher affinity for 5-HT1A receptor than for 5-HT1-non-A, 5-HT2, α2-adrenergic, dopamine D2 and benzodiazepine receptors. In rat hippocampal membranes, BP-554 inhibited the activity of adenylate cyclase stimulated by forskolin [1].

In mice, BP-554 inhibited the accumulation of 5-hydroxytryptophan after decarboxylase inhibition and reduced the concentration of 5-hydroxy-indoleacetic acid in the brain. Also, BP-554 increased the levels of serum corticosterone and induced hypothermia [1]. The 5-HT1(A) receptor, 5-HT, brain-derived neurotrophic factor (BDNF) receptor trkB and BDNF formed an auto/paracrine loop to regulate the serotonergic phenotype. In rats, BP-554 dose-dependently increased amounts of neurons expressing serotonergic markers [2]. In monkeys, injection of BP554 into the primary visual cortex decreased multiunit activity (MUA) without influenced blood oxygen-level-dependent (BOLD) and local field potential (LFP) activity [3].

References:
[1]. Matsuda T, Seong YH, Aono H, et al. Agonist activity of a novel compound, 1-[3-(3,4-methylenedioxyphenoxy)propyl]-4-phenyl piperazine (BP-554), at central 5-HT1A receptors. Eur J

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Pharmacol, 1989, 170(1-2): 75-82.
[2]. Galter D, Unsicker K. Sequential activation of the 5-HT1(A) serotonin receptor and TrkB induces the serotonergic neuronal phenotype. Mol Cell Neurosci, 2000, 15(5): 446-455.
[3]. Rauch A, Rainer G, Logothetis NK. The effect of a serotonin-induced dissociation between spiking and perisynaptic activity on BOLD functional MRI. Proc Natl Acad Sci U S A, 2008, 105(18): 6759-6764.

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