Product Data Sheet

Product Name: ATC 0065
Cat. No.: GC10994

Chemical Properties

Cas. No.	510732-84-0		
Chemical Name	N2-((1r,4r)-4-((4-bromo-2-(trifluoromethoxy)phenethyl)amino)cyclohexyl)-N4,N4-dimethylquinazoline-2,4-diamine dihydrochloride		
SMILES	BrC1=CC=C(C(OC(F)(F)F)=C1)CCN[C@@H](CC2)CC[C@H]2NC3=NC4=CC=CC=C4C(N(C)C)=N3.Cl.Cl		
Formula	$C_{25}H_{29}BrF_3N_5O.2HCl$	M.Wt	625.35
Solubility	Soluble in DMSO	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	ATC 0065		

Background

ATC0065 is a selective and potent antagonist of the melanin-concentrating hormone receptor 1 (MCH1) with IC50 of 15.7 nM. This component also displays affinity for 5-HT1A and 5-HT2B receptors with IC50 of 62.9nM and 266 nM respectively.

Melanin-concentrating hormone receptor (MCH1), a member of the G protein-coupled receptor family 1, is an integral plasma membrane protein which binds melanin-concentrating hormone. The protein can inhibit cAMP accumulation and stimulate intracellular calcium flux, and is probably involved in the neuronal regulation of food consumption.

In vitro assay, ATC0065 bounds with high affinity to the MCH-R1 with IC50 value of 16 nMand showed good metabolic stability in liver microsomes isolated from human and rat 1.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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In rodents, ATC0065 is potent and orally active MCHR1 antagonists with anxiolytic and antidepressant activity. ATC0065 treatmetn significantly reversed swim stress-induced anxiety in the stress-induced hyperthermia in mice and elevated plus-maze test in rats2. However, ATC0065 did not affect spontaneous locomotor activity or rotarod performance in rats 2.

References:

1. Kanuma K, Omodera K, Nishiguchi M, et al. Identification of 4-amino-2-cyclohexylaminoquinazolines as metabolically stable melanin-concentrating hormone receptor 1 antagonists. Bioorganic & medicinal chemistry. 2006;14(10):3307-3319.
2. Chaki S, Funakoshi T, Hirota-Okuno S, et al. Anxiolytic- and antidepressant-like profile of ATC0065 and ATC0175: nonpeptidic and orally active melanin-concentrating hormone receptor 1 antagonists. The Journal of pharmacology and experimental therapeutics. 2005;313(2):831-839.

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