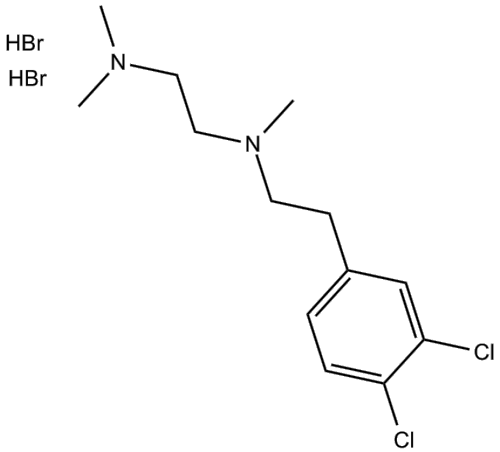
Product Data Sheet

Product Name: BD 1047 dihydrobromide
Cat. No.: GC15374

Chemical Properties

Cas. No.	138356-21-5		
Chemical Name	N1-(3,4-dichlorophenethyl)-N1,N2,N2-trimethylethane-1,2-diamine dihydrobromide		
SMILES	ClC1=CC(CCN(C)CCN(C)C)=CC=C1Cl.Br.Br		
Formula	$C_{13}H_{20}Cl_2N_2.2HBr$	M.Wt	437.04
Solubility	≥ 43.9 mg/mL in DMSO with gentle warming, ≥ 43.5 mg/mL in Water with gentle warming	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C 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



Background

BD 1047 dihydrobromide is an antagonist of σ1 receptor with Ki values of 0.93 and 47 nM for σ-1 receptor and σ-2 receptor, respectively [1].

Product Data Sheet

σ-receptor is a type of opioid receptor. There are two subtypes of σ-receptor: σ-1 and σ-2.σ-1 receptor plays an important role in stimulating dopamine release and modulating the actions of cocaine.

BD 1047 dihydrobromide is a σ-1 receptor antagonist. BD 1047 reduced the dystonia induced by haloperidol and di-o-tolylguanidine (DTG) in a dose-dependent way [1].

In male Wistar rats, BD1047 (20 or 30 mg/kg) reversed response reinstatement induced by the cocaine discriminative stimulus (SD). However, BD1047 had no effect on sweetened condensed milk (SCM) SD-induced responding [2]. In rats with chronic constriction injury (CCI) of the right sciatic nerve, BD1047 significantly relieved CCI-induced mechanical allodynia during the induction. Also, BD1047 significantly increased the expression of σ-1 receptor in the ipsilateral spinal cord dorsal horn and inhibited N-methyl-D-aspartate receptor subunit 1 (NR1) expression and phosphorylation induced by CCI [3].

References:
[1]. Matsumoto RR, Bowen WD, Tom MA, et al. Characterization of two novel sigma receptor ligands: antidystonic effects in rats suggest sigma receptor antagonism. Eur J Pharmacol, 1995, 280(3): 301-310.
[2]. Martin-Fardon R, Maurice T, Aujla H, et al. Differential effects of sigma1 receptor blockade on self-administration and conditioned reinstatement motivated by cocaine vs natural reward. Neuropsychopharmacology, 2007, 32(9): 1967-1973.
[3]. Roh DH, Kim HW, Yoon SY, et al. Intrathecal injection of the sigma(1) receptor antagonist BD1047 blocks both mechanical allodynia and increases in spinal NR1 expression during the induction phase of rodent neuropathic pain. Anesthesiology, 2008, 109(5): 879-889.

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA