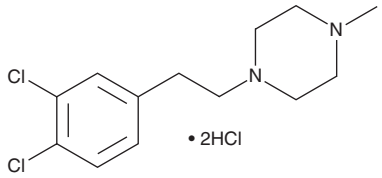
PRODUCT INFORMATION

BD 1063 (hydrochloride)

Item No. 23874

CAS Registry No.:	206996-13-6
Formal Name:	1-[2-(3,4-dichlorophenyl)ethyl]-4-methyl-piperazine, dihydrochloride
MF:	$C_{13}H_{18}Cl_2N_2 \bullet 2HCl$
FW:	346.1
Purity:	≥95%
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

BD 1063 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the BD 1063 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. BD 1063 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of BD 1063 (hydrochloride) in these solvents is approximately 5, 16, and 11 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of BD 1063 (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of BD 1063 (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

BD 1063 is an antagonist of sigma-1 (σ_1) receptors (K_i = 9 nM).[1] It is selective for σ_1 receptors over σ_2 (K_i = 449 nM) and serotonin 5-HT_2 receptors (K_i = 2,552 nM), as well as opioid, dopamine D_2, PCP, serotonin 5-HT_1, α_1-, α_2-, and β-adrenergic receptors where it has K_i values of greater than 10 µM. BD 1063 (30 mg/kg) inhibits locomotor activity induced by cocaine (Item Nos. 16186 | ISO60176) in mice and decreases ethanol intake in a dose-dependent manner in two rat models of excessive drinking when administered at doses ranging from 3.3 to 11 mg/kg.[1,2]

References

1. McCracken, K.A., Bowen, W.D., de Costa, B.R., *et al*. Two novel σ receptor ligands, BD1047 and LR172, attenuate cocaine-induced toxicity and locomotor activity. *Eur. J. Pharmacol.* **370(3)**, 225-232 (1999).
2. Sabino, V., Cottone, P., Zhao, Y., *et al*. The sigma receptor antagonist BD-1063 decreases ethanol intake and reinforcement in animal models of excessive drinking. *Neuropsychopharmacology* **34(6)**, 1482-1493 (2009).

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