

Catalog # 10-4211 BD1063 dihydrochloride

1-[2-(3,4-Dichlorophenyl)ethyl]-4-methylpiperazine dihydrochloride 206996-13-6 Lot # JKM1182

BD1063 is potent and selective sigma-1 antagonist (IC $_{50}$'s: σ 1 = 9nM, σ 2 = 449nM). BD1063 abolished mechanical and thermal hyperalgesia in mice with carrageenan-induced acute inflammation by enhancing the action of endogenous opioid peptides of immune origin in a σ 1 dependent manner. BD1063 potentiated μ -opioid antinociception in mice in a sigma-dependent manner. BD-1063 has been used in animal models to successfully treat compulsive eating and excessive ethanol drinking.

- 1) Matsumoto et al. (1995), Characterisation of two novel σ receptor ligands: antidystonic effects in rats suggest σ receptor antagonism; Eur.J.Pharmacol. **280** 301
- 2) Tejada et al. (2017), Sigma-1 receptors control immune-driven peripheral opioid analgesia during inflammation in mice; Proc.Natl.Acad.Sci.USA **114** 8396
- 3) Sanchez-Fernandez et al. (2014), Modulation of peripheral μ -opioid analgesia by σ 1 receptors; J.Pharmacol.Exp.Ther. **348** 32
- 4) Cottone et al. (2012), Antagonism of sigma-1 receptors blocks compulsive-like eating; Neuropsychopharmaology **37** 2593
- 5) Sabino et al. (2009), The sigma-receptor antagonist BD-1063 decrease ethanol intake and reinforcement in animal models of excessive drinking; Neuropsychopharmaology **34** 1482

PHYSICAL DATA

Molecular Weight: 346.13

Molecular Formula: $C_{13}H_{18}Cl_2N_2 \cdot 2HCl$ Purity: >98% by HPLC

NMR: Conforms

Solubility: Water (>25 mg/mL)
Physical Description: Off-white solid

Storage and Stability: Store as supplied desiccated at -20°C for up to 1 year from the date of purchase.

Solutions in water may be stored at -20°C for up to 3 months.

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