

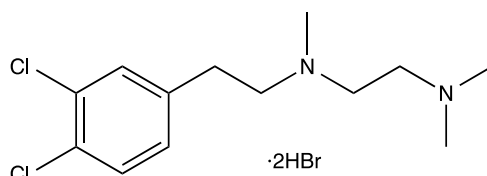
**Catalog # 10-4210**

**BD1047 dihydrobromide**

N-[2-(3,4Dichlorophenyl)ethyl]-N-methyl-2-(dimethylamino)ethylamine dihydrobromide

138356-21-5

Lot # JKM1193



BD1047 is a potent and selective sigma-1 antagonist ( $IC_{50}$ 's:  $\sigma_1 = 0.93nM$ ,  $\sigma_2 = 47nM$ ).<sup>1</sup> Pretreatment of mice with BD1047 reduced convulsions, lethality, and locomotor activity induced by cocaine.<sup>2</sup> BD1047 attenuated high fat diet-induced peripheral neuropathy in mice.<sup>3</sup> BD1047 displayed antinociceptive effects in several rodent pain models.<sup>4-6</sup> It also inhibits the  $\beta$ -adrenoreceptor ( $IC_{50} = 145 nM$ ).<sup>1</sup>

- 1) Matsumoto *et al.* (1995), *Characterisation of two novel  $\sigma$  receptor ligands: antidystonic effects in rats suggest  $\sigma$  receptor antagonism*; Eur.J.Pharmacol. **280** 301
- 2) McCracken *et al.* (1999), *Two novel sigma receptor ligands, BD1047 and LR172, attenuate cocaine-induced toxicity and locomotor activity*; Eur.J.Pharmacol. **370** 225
- 3) Song *et al.* (2017), *Role of sigma 1 receptor in high fat diet-induced peripheral neuropathy*; Biol.Chem. **398** 1141
- 4) Jeong *et al.* (2005), *The spinal antinociceptive mechanism determined by systemic administration of BD1047 in zymosan-induced hyperalgesia in rats*; Brain Res. Bull. **119(Pt.A)** 93
- 5) Roh and Yoon (2014), *Sigma-1 receptor antagonist BD1047 reduces nociceptive response and phosphorylation of p38 MAPK in mice orofacial formalin model*; Biol.Pharm.Bull. **37** 145
- 6) Zhu *et al.* (2015), *Sigma-1 Receptor Antagonist BD1047 Reduces Mechanical Allodynia in a Rat Model of Bone Cancer Pain through the Inhibition of Spinal NR1 Phosphorylation and Microglia Activation*; Mediators Inflamm. **2015** 265056

**PHYSICAL DATA**

Molecular Weight: 437.04

Molecular Formula:  $C_{13}H_{20}Cl_2N_2 \cdot 2HBr$

Purity: >98% by HPLC

NMR: Conforms

Solubility: DMSO (20 mg/mL) and water (20 mg/mL)

Physical Description: Off-white solid

Storage and Stability: Store as supplied desiccated at  $-20^{\circ}C$  for up to 1 year from the date of purchase. Solutions in DMSO or water may be stored at  $-20^{\circ}C$  for up to 3 months.

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