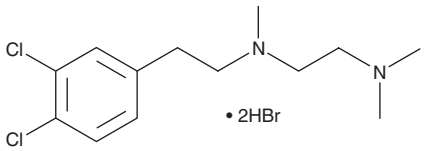
PRODUCT INFORMATION

BD 1047 (hydrobromide)

Item No. 22928

CAS Registry No.: 138356-21-5
Formal Name: N^1-[2-(3,4-dichlorophenyl)ethyl]-N^1,N^2,N^2-trimethyl-1,2-ethanediamine, dihydrobromide
MF: $C_{13}H_{20}Cl_2N_2 \bullet 2HBr$
FW: 437.0
Purity: ≥98%
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 1047 (hydrobromide) is supplied as a crystalline solid. Aqueous solutions of BD 1047 (hydrobromide) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of BD 1047 (hydrobromide) 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 1047 is a selective antagonist of sigma-1 (σ_1) receptors (K_i = 0.9 nM in a radioligand binding assay).[1] It is selective for σ_1 receptors with binding affinity values greater than 10,000 nM for human recombinant dopamine, opioid, PCP, and serotonin receptors *in vitro*. *In vivo*, pretreatment with BD 1047 protects against convulsions and lethality induced by cocaine (Item Nos. 16186 | ISO60176) and reduces cocaine-induced locomotor activity. It reduces dystonias induced by the σ receptor agonists haloperidol (Item No. 12014) and di-o-tolylguanidine (DTG) in rats in a dose-dependent manner.[2] *In vivo* administration of BD 1047 also attenuates mechanical allodynia and microglial activation in a rat model of bone cancer pain.[3]

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. Matsumoto, R.R., Bowen, W.D., Tom, V.A., *et al.* Characterization of two novel σ receptor ligands: Antidystonic effects in rats suggest σ receptor antagonism. *Eur. J. Pharmacol.* **280(3)**, 301-310 (1995).
3. Zhu, S., Wang, C., Han, Y., *et al.* 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 (2015).

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