Product Datasheet

Bromopride

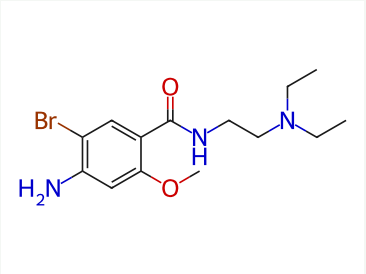
Catalog No. **BP-02384** · CAS **4093-35-0** · Form **free base** · Physical state **solid** · Color **Off-white to light yellow** · Version **1.0** · Revision **2026-09-11**

FOR RESEARCH USE ONLY. NOT FOR HUMAN OR VETERINARY USE.

Target	Research area
Dopamine Receptor	**Neurological Disease**

Molecular formula	$C_{14}H_{22}BrN_3O_2$
Molecular weight	**344.2470**

STRUCTURE



DESCRIPTION

Bromopride is a selective, irreversible, competitive, and orally effective dopamine D2 receptor antagonist. Bromopride can pass through the blood-brain barrier, inhibit the vomiting center, and enhance gastrointestinal motility, exerting antiemetic and gastrointestinal motility effects. Bromopride antagonizes dopamine-mediated vomiting reflexes and promotes gastrointestinal smooth muscle contraction, and has no adverse effects on abdominal wall healing in rats with postoperative abdominal infection. Bromopride can be used for the study of digestive system diseases (such as gastric hypomotility, nausea and vomiting).

BIOLOGICAL ACTIVITY

In Vitro

Axon regeneration assay: Bromopride (100 μM; 5 d) significantly promotes axon regeneration in a rat cortical neuron scratch injury model and reversed the inhibitory effect of chondroitin sulfate proteoglycan (CSPG) on axon growth[1].

Metabolite analysis assay: Bromopride (10 μM; 4 h) can be metabolized into 20 metabolites in mouse, rat, rabbit, dog, monkey and human hepatocytes.

In Vivo

Rat sexual behavior model: Bromopride (20-60 mg; intravenous injection; single dose) dose-dependently inhibited male rat mating behavior (such as prolonged post-ejaculation latency) and increased serum prolactin levels[2].

Rat peritonitis model: Bromopride (1 mg/kg; subcutaneous injection; every 12 hours; 3/7 days) significantly reduced abdominal wall wound edema and fibrin deposition in Wistar rats with induced peritonitis 7 days after surgery, without affecting wound breaking strength

SOLUBILITY

Soluble in DMSO

In vitro	DMSO : 170 mg/mL

REFERENCES

[1]. Huebner EA, et al. Diltiazem Promotes Regenerative Axon Growth. Mol Neurobiol. 2019 Jun;56(6):3948-3957.

[2]. Dunne CE, et al. Metabolism of bromopride in mouse, rat, rabbit, dog, monkey, and human hepatocytes. Drug Metab Pharmacokinet. 2013;28(6):453-61.

[3]. Oliveira MV, et al. Effects of bromopride on abdominal wall healing with induced peritoneal sepsis after segmental colectomy and colonic anastomosis in rats. Acta Cir Bras. 2011 Dec;26(6):433-7.