

PRODUCT INFORMATION



BNTX (maleate)

Item No. 39829

CAS Registry No.: 864461-31-4
Formal Name: (5 α ,7E)-17-(cyclopropylmethyl)-4,5-epoxy-3,14-dihydroxy-7-(phenylmethylene)-morphinan-6-one, 2Z-butenedioate

Synonym: 7-Benzylidenenaltrexone

MF: C₂₇H₂₇NO₄ • C₄H₄O₄

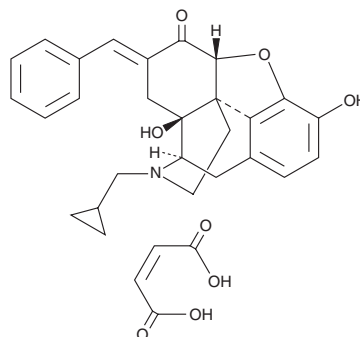
FW: 545.6

Purity: ≥95%

Supplied as: A 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

BNTX (maleate) is supplied as a solid. A stock solution may be made by dissolving the BNTX (maleate) in the solvent of choice, which should be purged with an inert gas. BNTX (maleate) is soluble in methanol.

Description

BNTX is a δ_1 -opioid receptor antagonist ($K_i = 0.1$ nM).¹ It is selective for the δ_1 -opioid receptor over the δ_2 -, μ -, and κ -opioid receptors (K_i s = 10.8, 13.3, and 58.6 nM, respectively). BNTX (1 and 10 μ M) decreases proliferation of primary mouse splenic B cells and the production of IL-2 and IL-4 by primary mouse splenic T lymphocytes.² It has antinociceptive activity in the tail-flick test in mice ($ED_{50} = 46.4$ pmol/animal) and decreases the antinociceptive activity of the δ_1 -opioid receptor agonist DPDPE (Item No. 23184) when administered at a dose of 6.3 pmol/animal.¹ BNTX (0.3-3 mg/kg) decreases the number of coughs induced by the terpene alkaloid capsaicin (Item No. 92350) in mice.³ It also reduces the number of parasitized red blood cells in a mouse model of chloroquine-resistant *P. chabaudi* infection when administered at a dose of 10 mg/kg.⁴

References

1. Portoghese, P.S., Sultana, M., Nagase, H., *et al.* A highly selective δ_1 -opioid receptor antagonist: 7-benzylidenenaltrexone. *Eur. J. Pharmacol.* **218(1)**, 195-196 (1992).
2. House, R.V., Thomas, P.T., Kozak, J.T., *et al.* Suppression of immune function by non-peptidic delta opioid receptor antagonists. *Neurosci. Lett.* **198(2)**, 119-122 (1995).
3. Kamei, J., Iwamoto, Y., Suzuki, T., *et al.* Involvement of δ_1 -opioid receptor antagonism in the antitussive effect of δ -opioid receptor antagonists *Eur. J. Pharmacol.* **251(2-3)**, 291-194 (1994).
4. Miyata, Y., Fujii, H., Osa, Y., *et al.* Opioid δ_1 receptor antagonist 7-benzylidenenaltrexone as an effective resistance reverser for chloroquine-resistant *Plasmodium chabaudi*. *Bioorg. Med. Chem. Lett.* **21(16)**, 4710-4712 (2011).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM