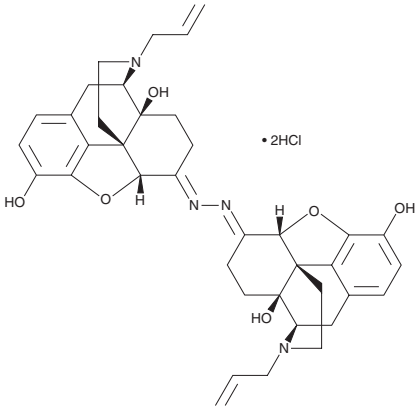
PRODUCT INFORMATION

Naloxonazine (hydrochloride)

Item No. 21950



CAS Registry No.:	880759-65-9
Formal Name:	(5α)-[(5α)-4,5-epoxy-3,14-dihydroxy-17-(2-propenyl)morphinan-6-ylidene]hydrazone, 4,5-epoxy-3,14-dihydroxy-17-(2-propenyl)-morphinan-6-one, dihydrochloride
Synonym:	NLXZ
MF:	$C_{38}H_{42}N_4O_6 \bullet 2HCl$
FW:	723.7
Purity:	≥98%
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

Naloxonazine (hydrochloride) is supplied as a solid. Aqueous solutions of naloxonazine (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. Naloxonazine (hydrochloride) is slightly soluble in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Naloxonazine is a μ-opioid receptor antagonist (K_i = 0.054 nM in a radioligand binding assay).[1] It is selective for μ-opioid over κ- and δ-opioid receptors (K_is = 11 and 8.6 nM, respectively, in radioligand binding assays) and selectively binds to high-affinity μ_1-opioid over μ- and δ-opioid receptors (K_ds = 0.1, 2, and 5 nM, respectively).[1,2] Naloxonazine (0.16 mg/kg) reverses sufentanil-induced antinociception, as well as hypercapnia and hypoxia, markers of respiratory depression, in rats.[3] It reduces ethanol self-administration and food intake in rats when administered at a dose of 10 mg/kg.[4] Naloxonazine (20 mg/kg) inhibits cocaine-induced place preference in rats.[5]

References

1. Raynor, K., Kong, H., Chen, Y., *et al.* Pharmacological characterization of the cloned κ-, δ-, and μ-opioid receptors. *Mol. Pharm.* **45(2),** 330-334 (1994).
2. Cruciani, R.A., Lutz, R.A., Munson, P.J., *et al.* Naloxonazine effects on the interaction of enkephalin analogs with *mu*-1, *mu* and *delta* opioid binding sites in rat brain membranes. *J. Pharmacol. Exp. Ther.* **242(1),** 15-20 (1987).
3. Verborgh, C. and Meert, T.F. Antagonistic effects of naloxone and naloxonazine on sufentanil-induced antinociception and respiratory depression in rats. *Pain* **83(1),** 17-24 (1999).
4. Mhatre, M. and Holloway, F. μ1-opioid antagonist naloxonazine alters ethanol discrimination and consumption. *Alcohol* **29(2),** 109-116 (2003).
5. Rademacher, D.J. and Steinpreis, R.E. Effects of the selective μ_1-opioid receptor antagonist, naloxonazine, on cocaine-induced conditioned place preference and locomotor behavior in rats. *Neurosci. Lett.* **332(3),** 159-162 (2002).

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