

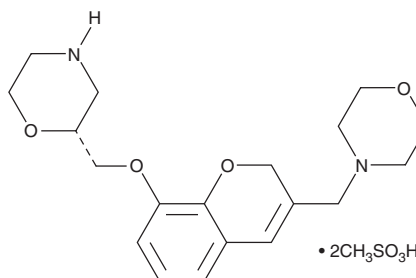
PRODUCT INFORMATION



NAS-181

Item No. 39191

CAS Registry No.: 1217474-40-2
Formal Name: (2R)-2-[[[3-(4-morpholinylmethyl)-2H-1-benzopyran-8-yl]oxy]methyl]-morpholine, bimesanesulfonate
MF: C₁₉H₂₆N₂O₄ • 2CH₃SO₃H
FW: 538.6
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

NAS-181 is supplied as a solid. A stock solution may be made by dissolving the NAS-181 in the solvent of choice. NAS-181 is soluble in organic solvents such as methanol, acetonitrile, and DMSO, which should be purged with an inert gas. It is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

NAS-181 is an antagonist of the serotonin (5-HT) receptor subtype 5-HT_{1B} (K_i = 47 nM for the rat receptor).¹ It is selective for 5-HT_{1B} over 5-HT_{1A}, 5-HT_{2A}, 5-HT_{2C}, 5-HT₆, and 5-HT₇ (K_is = >3,000 nM for all for the rat receptors). NAS-181 (100 or 1,000 nM) potentiates potassium-stimulated 5-HT release in isolated and preloaded rat occipital cortical slices. It increases extracellular levels of acetylcholine (ACh), but not glutamate or GABA, in the frontal cortex and ventral hippocampus of non-anesthetized rats when administered at doses of 1, 5, or 10 mg/kg.² NAS-181 (3 mg/kg) induces wet-dog shakes in rats, an effect that can be prevented by the tryptophan hydroxylase inhibitor *p*-chloro phenylalanine (Item No. 26168).¹ It increases the length of freezing time induced by contextual fear conditioning in mice.³

References

1. Berg, S., Larsson, L.G., Rényi, L., *et al.* (R)-(+)-2-[[[3-(Morpholinomethyl)-2H-chromen-8-yl]oxy]methyl]morpholine methanesulfonate: A new selective rat 5-hydroxytryptamine_{1B} receptor antagonist. *J. Med. Chem.* **41**(11), 1934-1942 (1998).
2. Hu, X.J., Wang, F.-H., Stenfors, C., *et al.* Effects of the 5-HT_{1B} receptor antagonist NAS-181 on extracellular levels of acetylcholine, glutamate and GABA in the frontal cortex and ventral hippocampus of awake rats: A microdialysis study. *Eur. Neuropsychopharmacol.* **17**(9), 580-586 (2007).
3. Hessel, M., Pape, H.-C., and Seidenbecher, T. Stimulation of 5-HT receptors in anterodorsal BNST guides fear to predictable and unpredictable threat. *Eur. Neuropsychopharmacol.* **39**, 56-69 (2020).

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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