

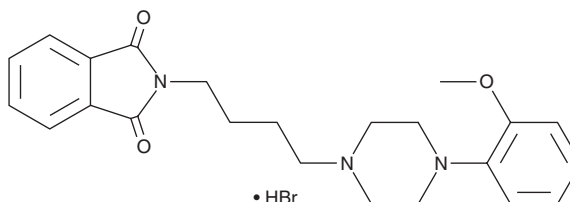
PRODUCT INFORMATION



NAN-190

Item No. 29314

CAS Registry No.: 115338-32-4
Formal Name: 2-[4-[4-(2-methoxyphenyl)-1-piperazinyl]butyl]-1H-isindole-1,3(2H)-dione, monohydrobromide
MF: $C_{23}H_{27}N_3O_3 \cdot HBr$
FW: 474.4
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 214, 219, 233, 241 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

NAN-190 is supplied as a crystalline solid. A stock solution may be made by dissolving the NAN-190 in the solvent of choice, which should be purged with an inert gas. NAN-190 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of NAN-190 in these solvents is approximately 1, 10, and 5 mg/ml, respectively.

NAN-190 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NAN-190 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. NAN-190 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NAN-190 is a mixed antagonist and partial agonist of the serotonin (5-HT) receptor subtype 5-HT_{1A}.¹ It inhibits radioligand binding to 5-HT_{1A} sites in rat hippocampal membranes ($K_i = 2$ nM). NAN-190 decreases 5-carboxamidotryptamine-mediated inhibition of forskolin-induced adenylyl cyclase activity in guinea pig hippocampal membranes in a concentration-dependent manner, indicating partial agonist activity. NAN-190 also antagonizes α_1 -adrenergic receptors (α_1 -ARs; $pA_{2s} = 9.47, 9.02,$ and 9.99 in isolated rat tail artery, rabbit aorta, and rat aorta, respectively).² *In vivo*, NAN-190 (1-300 $\mu g/kg$) decreases blood pressure, without modifying heart rate, in anesthetized rats. It inhibits phenylephrine-induced pressor responses in pithed rats. NAN-190 (5 mg/kg, i.p.) potentiates the circadian response to light in dark-adapted and entrained hamsters.³

References

1. Rydelek-Fitzgerald, L., Teitler, M., Fletcher, P.W., *et al.* NAN-190: Agonist and antagonist interactions with brain 5-HT_{1A} receptors. *Brain Res.* **532(1-2)**, 191-196 (1990).
2. Villalobos-Molina, R., Gallardo-Ortiz, I.A., López-Guerrero, J.J., *et al.* Evidence that NAN-190-induced hypotension involves vascular α_1 -adrenoceptor antagonism in the rat. *Eur. J. Pharmacol.* **455(1)**, 59-64 (2002).
3. Kessler, E.J., Sprouse, J., and Harrington, M.E. NAN-190 potentiates the circadian response to light and speeds re-entrainment to advanced light cycles. *Neuroscience* **154(4)**, 1187-1194 (2008).

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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