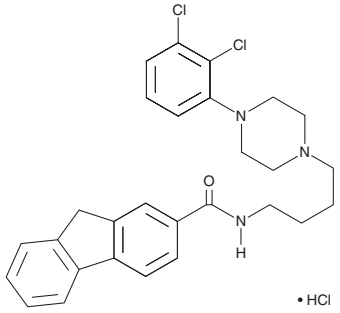
PRODUCT INFORMATION

NGB 2904 (hydrochloride)

Item No. 21457

CAS Registry No.: 189061-11-8
Formal Name: N-[4-[4-(2,3-dichlorophenyl)-1-piperazinyl] butyl]-9H-fluorene-2-carboxamide, monohydrochloride
MF: $C_{28}H_{29}Cl_2N_3O \bullet HCl$
FW: 530.9
Purity: ≥98%
UV/Vis.: λ_{max}: 282, 306 nm
Supplied as: A crystalline 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

NGB 2904 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the NGB 2904 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. NGB 2904 (hydrochloride) is soluble in organic solvents such as ethanol and DMSO. The solubility of NGB 2904 (hydrochloride) in these solvents is approximately 5 and 25 mM, respectively.

Description

NGB 2904 is an antagonist that is selective for the dopamine D_3 receptor (K_i = 1.4 nM).[1] It potently inhibits quinpirole-stimulated mitogenesis (IC_{50} = 6.8 nM).[2] NGB 2904 attenuates cocaine- and stress-induced reinstatement of drug-seeking behavior in rats.[3,4] It also increases spontaneous and amphetamine-stimulated locomotion in mice.[5]

References

1. Yuan, J., Chen, X., Brodbeck, R., *et al.* NGB 2904 and NGB 2849: Two highly selective dopamine D_3 receptor antagonists. *Bioorg. Med. Chem. Lett.* **8(19)**, 2715-2718 (1998).
2. Grundt, P., Carlson, E.E., Cao, J., *et al.* Novel heterocyclic trans olefin analogues of N-{4-[4-(2,3-dichlorophenyl)piperazin-1-yl]butyl}arylcarboxamides as selective probes with high affinity for the dopamine D_3 receptor. *J. Med. Chem.* **48(3)**, 839-848 (2005).
3. Gilbert, J.G., Newman, A.H., Gardner, E.L., *et al.* Acute administration of SB-277011A, NGB 2904, or BP 897 inhibits cocaine cue-induced reinstatement of drug-seeking behavior in rats: Role of dopamine D_3 receptors. *Synapse* **57(1)**, 17-28 (2005).
4. Xi, Z.-X., Newman, A.H., Gilbert, J.G., *et al.* The novel dopamine D_3 receptor antagonist NGB 2904 inhibits cocaine's rewarding effects and cocaine-induced reinstatement of drug-seeking behavior in rats. *Neuropsychopharmacology* **31(7)**, 1393-1405 (2006).
5. Pritchard, L.M., Newman, A.H., McNamara, R.K., *et al.* The dopamine D_3 receptor antagonist NGB 2904 increases spontaneous and amphetamine-stimulated locomotion. *Pharmacol. Biochem. Behav.* **86(4)**, 718-726 (2007).

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