

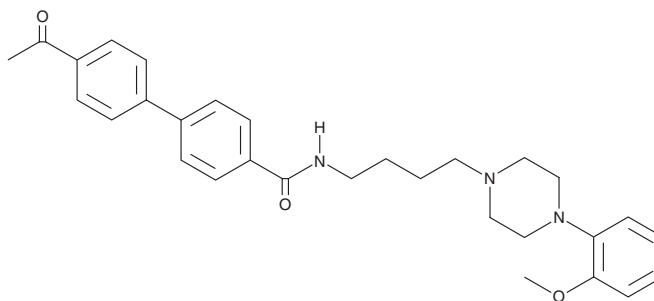
PRODUCT INFORMATION



GR103691

Item No. 34870

CAS Registry No.: 162408-66-4
Formal Name: 4'-acetyl-N-[4-[4-(2-methoxyphenyl)-1-piperazinyl]butyl]-[1,1'-biphenyl]-4-carboxamide
MF: C₃₀H₃₅N₃O₃
FW: 485.6
Purity: ≥98%
UV/Vis.: λ_{max}: 287 nm
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

GR103691 is supplied as a solid. A stock solution may be made by dissolving the GR103691 in the solvent of choice, which should be purged with an inert gas. GR103691 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of GR103691 in these solvents is approximately 1 and 5 mg/ml, respectively.

Description

GR103691 is a dopamine D₃ receptor antagonist (K_i = 0.32 nM).¹ It is selective for dopamine D₃ receptors over dopamine D₁, D₂, and D₄ receptors (K_s = 398.11, 39.81, and 81 nM, respectively) and over the serotonin (5-HT) receptor subtype 5-HT_{1A}, α₁-adrenergic receptors, and M₁ muscarinic receptors (K_s = 3.16, 12.59, and >1,000 nM, respectively).^{1,2} GR103691 inhibits increases in locomotor activity induced by infusion of the GABA_A and GABA_C receptor agonist muscimol (Item No. 13667) into the rat ventral tegmental area (VTA; ED₅₀ = 0.3 mg/kg) but not infusion into the substantia nigra zona reticulata (SNr; ED₅₀ = >10 mg/kg).¹ It increases the time rats spend in the light area of the light-dark exploration test and the open areas of the elevated plus maze without affecting locomotor activity, indicating anxiolytic-like behavior, when injected into the basolateral amygdala (BLA) at a dose of 5 pmol/animal.³

References

1. Murray, P.J., Harrison, L.A., Johnson, M.R., *et al.* A novel series of arylpiperazines with high affinity and selectivity for the dopamine D₃ receptor. *Bioor. Med. Chem. Lett.* **5(3)**, 219-222 (1995).
2. Audinot, V., Newman-Tancredi, A., Gobert, A., *et al.* A comparative *in vitro* and *in vivo* pharmacological characterization of the novel dopamine D₃ receptor antagonists (+)-S 14297, nafadotride, GR 103,691 and U 99194. *J. Pharmacol. Exp. Ther.* **287(1)**, 187-197 (1998).
3. Diaz, M.R., Chappell, A.M., Christian, D.T., *et al.* Dopamine D₃-like receptors modulate anxiety-like behavior and regulate GABAergic transmission in the rat lateral/basolateral amygdala. *Neuropsychopharmacology* **36(5)**, 1090-1103 (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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