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# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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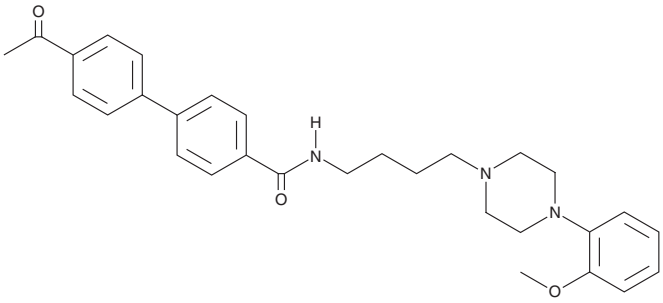
# PRODUCT INFORMATION

## 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:** | $C_{30}H_{35}N_3O_3$ |
| **FW:** | 485.6 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 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 $D_3$ receptor antagonist ($K_i$ = 0.32 nM).[1] It is selective for dopamine $D_3$ receptors over dopamine $D_1$, $D_2$, and $D_4$ receptors ($K_i$s = 398.11, 39.81, and 81 nM, respectively) and over the serotonin (5-HT) receptor subtype 5-$HT_{1A}$, $\alpha_1$-adrenergic receptors, and $M_1$ muscarinic receptors ($K_i$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; $ED_{50}$ = 0.3 mg/kg) but not infusion into the substantia nigra zona reticulata (SNr; $ED_{50}$ = >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 $D_3$ 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 $D_3$ 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).





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