

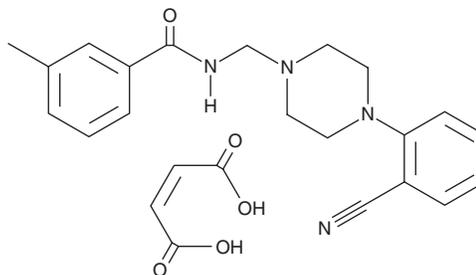
PRODUCT INFORMATION



PD 168077 (maleate)

Item No. 29789

CAS Registry No.: 630117-19-0
Formal Name: N-[[4-(2-cyanophenyl)-1-piperazinyl]methyl]-3-methylbenzamide, (2Z)-2-butenedioate
MF: C₂₀H₂₂N₄O • C₄H₄O₄
FW: 450.5
Purity: ≥98%
UV/Vis.: λ_{max}: 220 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

PD 168077 (maleate) is supplied as a crystalline solid. A stock solution may be made by dissolving the PD 168077 (maleate) in the solvent of choice, which should be purged with an inert gas. PD 168077 (maleate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PD 168077 (maleate) in these solvents is approximately 1 mg/ml.

PD 168077 (maleate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PD 168077 (maleate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PD 168077 (maleate) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PD 168077 is a dopamine D₄ receptor agonist (K_i = 8.7 nM in CHO Pro 5 cells expressing the human receptor).¹ It is selective for dopamine D₄ over D₂ and D₃ receptors (K_is = 3,740 and 2,810 nM, respectively), as well as α₁- and α₂-adrenergic and serotonin (5-HT) receptor subtypes 5-HT_{1A} and 5-HT_{2A} (K_is = 168, 177, 385, and 4,010 nM, respectively). PD 168077 (20 μM) induces CaMKII translocation from the dendritic shaft to postsynaptic sites on the dendritic processes of primary rat embryonic prefrontal cortex pyramidal neurons, an effect that can be blocked by the IP₃ receptor antagonist 2APB or the calcium chelator BAPTA AM (Item No. 15551).² PD 168077 (50-200 ng/animal) induces penile erections in rats when injected into the paraventricular nucleus (PVN) of the hypothalamus.³ PD 168077 (0.2-25 mg/kg, s.c.) increases spontaneous locomotor activity and reduces grooming and rearing in rats.⁴

References

1. Glase, S.A., Akunne, H.C., Georgic, L.M., et al. *J. Med. Chem.* **40**(12), 1771-1772 (1997).
2. Gu, Z., Jiang, Q., Yuen, E.Y., et al. *Mol. Pharmacol.* **69**(3), 813-822 (2005).
3. Melis, M.R., Succu, S., Mascia, M.S., et al. *Neurosci. Lett.* **379**(1), 59-62 (2005).
4. Clifford, J.J., and Waddington, J.L. *Neuropsychopharmacology* **22**(5), 538-544 (2000).

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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