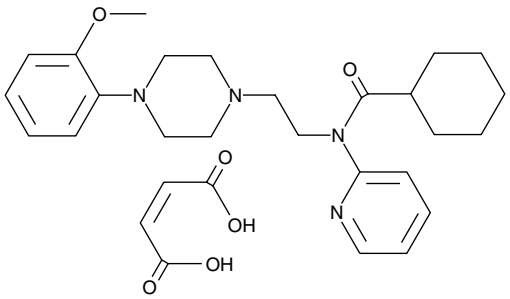
Product Information

WAY-100635 (maleate)

Item No. 14599

CAS Registry No.: 1092679-51-0
Formal Name: N-[2-[4-(2-methoxyphenyl)-1-piperazinyl]ethyl]-N-2-pyridinyl-cyclohexanecarboxamide, 2Z-butenedioate
MF: $C_{25}H_{34}N_4O_2 \bullet C_4H_4O_4$
FW: 538.6
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 271 nm



Laboratory Procedures

For long term storage, we suggest that WAY-100635 (maleate) be stored as supplied at -20°C. It should be stable for at least two years.

WAY-100635 (maleate) is supplied as a crystalline solid. A stock solution may be made by dissolving the WAY-100635 (maleate) in the solvent of choice. WAY-100635 (maleate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of WAY-100635 (maleate) in these solvents is approximately 10, 15, and 25 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of WAY-100635 (maleate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of WAY-100635 (maleate) in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

WAY-100635 is a potent, silent antagonist of serotonin 5-HT_{1A} receptors with an IC_{50} value of 2.2 nM (K_i = 0.8 nM) for inhibiting 5-HT_{1A} receptors in rat hippocampal membranes.[1,2] Because it displays 100-fold selectivity for 5-HT_{1A} over other 5-HT subtypes, WAY-100635 is classically used to examine the distribution and function of 5-HT_{1A} receptors.[3] However, WAY-100635 has also been shown to exhibit agonist activity at dopamine D_4 receptors (K_d = 2.4 nM).[4]

References

1. Zhuang, Z.-P., Kung, M.-P., and Kung, H.F. Synthesis and evaluation of 4-(2'-methoxyphenyl)-1-[2'-[N-(2"-pyridinyl)-p-iodobenzamido]ethyl]piperazine (p-MPPI): A new iodinated 5-HT_{1A} ligand. *J. Med. Chem.* **37(10)**, 1406-1407 (1994).
2. Mensonides-Harsema, M.M., Liao, Y., Böttcher, H., *et al.* Synthesis and *in vitro* and *in vivo* functional studies of ortho-substituted phenylpiperazine and N-substituted 4-N-(o-methoxyphenyl)aminopiperidine analogues of WAY100635. *J. Med. Chem.* **43(3)**, 432-439 (2000).
3. Forster, E.A., Cliffe, I.A., Bill, D.J., *et al.* A pharmacological profile of the selective silent 5-HT_{1A} receptor antagonist, WAY-100635. *Eur. J. Pharmacol.* **281(1)**, 81-88 (1995).
4. Chemel, B.R., Roth, B.L., Armbruster, B., *et al.* WAY-100635 is a potent dopamine D_4 receptor agonist. *Psychopharmacology (Berl)* **188(2)**, 244-251 (2006).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/14599

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com