

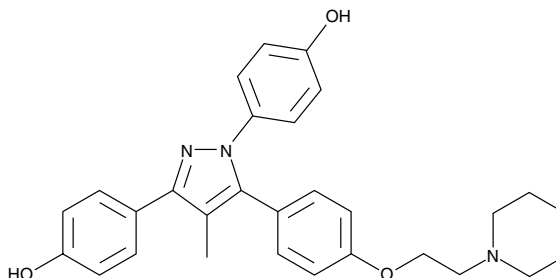
Product Information



Methylpiperidino pyrazole

Item No. 13863

CAS Registry No.: 289726-02-9
Formal Name: 4-[1-(4-hydroxyphenyl)-4-methyl-5-[4-[2-(1-piperidinyl)ethoxy]phenyl]-1H-pyrazol-3-yl]-phenol
Synonym: MPP
MF: C₂₉H₃₁N₃O₃
FW: 469.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 204, 256 nm



Laboratory Procedures

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

MPP is supplied as a crystalline solid. A stock solution may be made by dissolving the MPP in the solvent of choice. MPP is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of MPP in these solvents is approximately 3, 5, and 14 mg/ml, respectively.

MPP is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MPP should first be dissolved in DMF and then diluted with the aqueous buffer of choice. MPP has a solubility of approximately 0.11 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Estrogen action is mediated through two estrogen receptor (ER) subtypes, ER α and ER β , which have distinct target tissue distributions and functional activities.¹ MPP is an ER antagonist that is highly selective for ER α compared to ER β (K_ds = 5.6 nM and 2.3 μ M, respectively).² It can inhibit ER α transcriptional activation with an IC₅₀ value of 80 nM.³ It has been used to evaluate the role of ER α in various estrogen-responsive systems, including certain cancers.⁴

References

1. Hall, J.M., Couse, J.F., and Korach, K.S. The multifaceted mechanisms of estradiol and estrogen receptor signaling. *J. Biol. Chem.* **276**(40), 36869-26872 (2001).
2. Sun, J., Huang, Y.R., Harrington, W.R., *et al.* Antagonists selective for estrogen receptor α . *Endocrinology* **143**(3), 941-947 (2002).
3. Zhou, H.-B., Carlson, K.E., Stossi, F., *et al.* Analogs of methyl-piperidinopyrazole (MPP): Antiestrogens with estrogen receptor α selective activity. *Bioorg. Med. Chem. Lett.* **19**(1), 108-110 (2009).
4. Davis, A.M., Mao, J., Naz, B., *et al.* Comparative effects of estradiol, methyl-piperidino-pyrazole, raloxifene, and ICI 182 780 on gene expression in the murine uterus. *J. Mol. Endocrinol.* **41**, 205-217 (2008).

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