

PRODUCT INFORMATION



Fenoldopam (mesylate)

Item No. 17629

CAS Registry No.: 67227-57-0
Formal Name: 6-chloro-2,3,4,5-tetrahydro-1-(4-hydroxyphenyl)-1H-3-benzazepine-7,8-diol, monomethanesulfonate

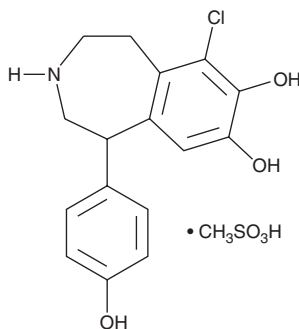
Synonym: SKF 82526J
MF: C₁₆H₁₆ClNO₃ • CH₃SO₃H
FW: 401.9
Purity: ≥95%

UV/Vis.: λ_{max}: 209, 283 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Fenoldopam (mesylate) is supplied as a crystalline solid. A stock solution may be made by dissolving the fenoldopam (mesylate) in the solvent of choice. Fenoldopam (mesylate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of fenoldopam (mesylate) in these solvents is approximately 0.25, 1, and 2 mg/ml, respectively.

Fenoldopam (mesylate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, fenoldopam (mesylate) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Fenoldopam (mesylate) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Fenoldopam is an agonist of dopamine D_{1A} (D1R) and D_{1B} (D5R) receptors (K_ds = 17 and 11 nM, respectively).^{1,2} Fenoldopam is used to study the roles of these receptors, in cells and *in vivo*, and to alter hemodynamic properties, including hypertension, in animals.^{3,4}

References

1. Carey, R.M., Stote, R.M., Dubb, J.W., *et al.* Selective peripheral dopamine-1 receptor stimulation with fenoldopam in human essential hypertension. *J. Clin. Invest.* **74(6)**, 2198-2207 (1984).
2. Tiberi, M., Jarvie, K.R., Silvia, C., *et al.* Cloning, molecular characterization, and chromosomal assignment of a gene encoding a second D₁ dopamine receptor subtype: Differential expression pattern in rat brain compared with the D_{1A} receptor. *Proc. Natl. Acad. Sci. USA* **88**, 7491-7495 (1991).
3. Gildea, J.J., Shah, I.T., Van Sciver, R., *et al.* The cooperative roles of the dopamine receptors, D₁R and D₅R, on the regulation of renal sodium transport. *Kidney Int.* **86(1)**, 118-126 (2014).
4. Swanson, T.A., Conte, T., Deeley, B., *et al.* Hemodynamic correlates of drug-induced vascular injury in the rat using high-frequency ultrasound imaging. *Toxicol. Pathol.* **42(4)**, 784-791 (2014).

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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