Product Data Sheet

Product Name: Fenoldopam
Cat. No.: GC14759

Chemical Properties

Cas. No.	67227-56-9		
Chemical Name	9-chloro-5-(4-hydroxyphenyl)-2,3,4,5-tetrahydro-1H-3-benzazepine-7,8-diol		
SMILES	C1CNCC(C2=CC(=C(C(=C21)Cl)O)O)C3=CC=C(C=C3)O		
Formula	$C_{16}H_{16}ClNO_3$	M.Wt	305.76
Solubility	≥ 15.29mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Fenoldopam		

Background

Fenoldopam(SKF 82526) is a drug and synthetic benzazepine derivative which acts as a selective D1 receptor partial agonist.Target: D1 ReceptorFenoldopam is a selective dopamine-1 (DA1) agonist with natriuretic/diuretic properties. Fenoldopam stimulated cAMP accumulation in LLC-PK1 cells in a dose-dependent manner, an effect which could be blocked by the DA1-selective antagonist Sch 23390. Although fenoldopam was more potent than DA (EC50 55.5 +/- 7.75 nM vs. 1.65 +/- 0.64 microM) in stimulating cAMP accumulation in LLC-PK1 cells, the maximum stimulation obtained by fenoldopam was only 37% of the maximum stimulation obtained by DA(Emax 13.0 +/- 2.95 pmol/mg of protein vs. 35.6 +/- 10.19 pmol/mg of protein) [1]. Fenoldopam is a selective dopamine1 (DA1) receptor agonist. Most of the DA1 receptor agonist activity of fenoldopam resides in the R-enantiomer, which also shows weaker alpha 2-adrenoceptor antagonist activity Fenoldopam produces vasodilation in vascular beds that are rich in vascular DA1 receptors [2].

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References:
[1]. Grenader, A. and D.P. Healy, Fenoldopam is a partial agonist at dopamine-1 (DA1) receptors in LLC-PK1 cells. J Pharmacol Exp Ther, 1991. 258(1): p. 193-8.
[2]. Nichols, A.J., R.R. Ruffolo, Jr., and D.P. Brooks, The pharmacology of fenoldopam. Am J Hypertens, 1990. 3(6 Pt 2): p. 116S-119S.

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