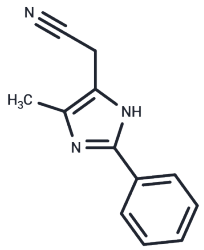
Data Sheet (Cat.No.T33272)

TargetMol

Mefenidil

Chemical Properties



CAS No. : 58261-91-9

Formula: C12H11N3

Molecular Weight: 197.24

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Mefenidil (McN-2378), a selective cerebral vasodilator, was shown to increase CBF in healthy brains without stimulating O2 uptake in a dog anesthesia model.
Targets(IC50)	Others,Adrenergic Receptor,DNA/RNA Synthesis
In vivo	Mefenidil (0.025, 0.25, and 2.5 mg/min/kg; i.v. infusion for 10 min; dogs) decreased systemic vascular resistance at 0.25 mg/min/kg without a change in CBF. At the highest infusion rate, CBF increased by 54 +/- 15% (+/- S.E.; n = 9) accompanied by a 9-mm Hg rise in intracranial pressure and a 14-mm Hg fall in mean aortic pressure. However, cardiac output increased by 68 +/- 8%, which was distributed primarily to right ventricle (541 +/- 95%), left ventricle (488 +/- 109%), small intestine (136 +/- 31%) and large intestine (57 +/- 15%). Within the brain, the thalamic and brainstem regions had larger increases in blood flow than the cerebellum and cerebrum. The caudate nucleus had a greater percentage of response than white matter. Using the cerebral venous outflow technique in another series of seven dogs, mefenidil (40-mg/kg i.v. bolus) produced a 20 +/- 8% increase in CBF with no change in O2 uptake. These data show that mefenidil is capable of increasing CBF in healthy brains without stimulating O2 uptake. However, the clinical usefulness of mefenidil as a cerebral vasodilator may be limited by the accompanying arterial hypotension due to systemic vasodilation, which was most prominent in the heart and gut.[1]

Solubility Information

Solubility	DMSO: 50 mg/mL (253.5 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.070 mL	25.3498 mL	50.6997 mL
5 mM	1.014 mL	5.070 mL	10.1399 mL
10 mM	0.507 mL	2.535 mL	5.070 mL
50 mM	0.1014 mL	0.507 mL	1.014 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Koehler RC, et al. Effect of mefenidil on cerebral and peripheral hemodynamics in dogs. J Pharmacol Exp Ther. 1985 May;233(2):327-32.
Flaim SF, et al. Effects of mefenidil hydrochloride on cerebral blood flow in conscious and anesthetized rat. Pharmacology. 1986;33(3):167-80.