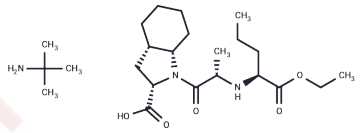
Data Sheet (Cat.No.T1484L)

TargetMol

Perindopril erbumine

Chemical Properties



CAS No. : 107133-36-8

Formula: C23H43N3O5

Molecular Weight: 441.61

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	Perindopril erbumine (S9490-3) is the tert-butylamine salt of perindopril, the ethyl ester of a non-sulfhydryl angiotensin-converting enzyme (ACE) inhibitor with antihypertensive activity. Upon hydrolysis, Perindopril erbumine (S9490-3) is converted to its active form perindoprilat, inhibiting ACE and the conversion of angiotensin I to angiotensin II; consequently, angiotensin II-mediated vasoconstriction and angiotensin II-stimulated aldosterone secretion from the adrenal cortex are inhibited and diuresis and natriuresis ensue.
Targets(IC50)	Apoptosis,RAAS,NF-κB,STAT,Angiotensin-converting Enzyme (ACE),MRP,Sirtuin
In vitro	In rats with Alzheimer's disease, Perindopril Erbumine administered at a dosage of 1 mg/kg/day significantly inhibits hippocampal ACE activity, thereby preventing brain damage and cognitive impairments. When dosed at 3 mg/kg/day, it inhibits 6.4% of in vivo RAECs cell apoptosis (induced by lipopolysaccharides), in contrast to a 3.2% inhibition rate observed with ramipril. Perindopril Erbumine, at a dose of 2 mg/kg/day administered orally, markedly suppresses the growth of SCC-VII tumors by inhibiting VEGF-induced angiogenesis, reducing blood vessel formation around the tumor. Similarly, at 2 mg/kg/day, orally administered Perindopril Erbumine strongly inhibits the growth of BNL-HCC tumors in rats, an effect comparable to daily oral administration of 20 mg/kg, while a 20 mg/kg/day dosage of AT1-R antagonists losartan or candesartan shows no inhibitory effect.
In vivo	Perindopril Erbumine inhibits the conversion activities of mutated angiotensin-converting enzyme (ACE) (which contains two active sites) from angiotensin-I to angiotensin-II and from Aβ42 to Aβ40, with IC50 values of 0.03-0.1 μM and 0.01-0.03 μM, respectively. At a concentration of 2 μM, Perindopril Erbumine exhibits no significant cytotoxicity towards KB and SCC-VII cells, yet it reduces the production of angiotensin II and the transcription of VEGF in KB cells in a concentration-dependent manner. Compared to its binding affinity for the angiotensin-I binding site of ACE, Perindopril Erbumine has a higher affinity for the bradykinin binding site, with a bradykinin/angiotensin-I selectivity ratio of 1.44.

Solubility Information

Solubility	H2O: 250 mg/mL (566.11 mM),Sonication is recommended. DMSO: 22.5 mg/mL (50.95 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 2.25 mg/mL (5.09 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2644 mL	11.3222 mL	22.6444 mL
5 mM	0.4529 mL	2.2644 mL	4.5289 mL
10 mM	0.2264 mL	1.1322 mL	2.2644 mL
50 mM	0.0453 mL	0.2264 mL	0.4529 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

Ceconi C, et al. Eur J Pharmacol, 2007, 577(1-3), 1-6.
Zou K, et al. J Biol Chem, 2009, 284(46), 31914-31920.
Yasumatsu R, et al. J Cancer Res Clin Oncol, 2004, 130(10), 567-573.
Yoshiji H, et al. Clin Cancer Res, 2001, 7(4), 1073-1078.
Ceconi C, et al. Cardiovasc Drugs Ther, 2007, 21(6), 423-429.