Fosinopril

Cat. No.: HY-B0690

CAS No.: 98048-97-6

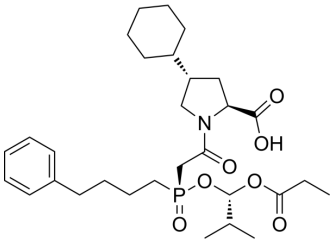
Molecular Formula: $C_{30}H_{46}NO_7P$

Molecular Weight: 563.66

Target: Angiotensin-converting Enzyme (ACE); Apoptosis

Pathway: Metabolic Enzyme/Protease; Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Fosinopril (SQ28555 free acid) is the ester proagent of angiotensin-converting enzyme (ACE) inhibitor with an IC_{50} value of 0.18 μM. Fosinopril demonstrates a non-competitive inhibition effect on ACE activity with an K_i value of 1.675 μM[1][2].
IC_{50} & Target	IC50: 0.18 μM[1]; Ki: 1.675 μM[2]
In Vitro	Fosinopril (0-100μM; 30 min) partially inhibits the cosedimentation of liposomes and recombinant LPLA2[1]. Fosinopril (250 nM) shows no inhibition of the soluble esterase activity of LPLA2[1]. Fosinopril (0.372, 0.744, 1.116 μM) displays a non-competitive inhibition effect on ACE activity with an K_i value of 1.675 μM[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Fosinopril (4.67 mg/kg; p.o.; 4 weeks) downregulates the creatine kinase (CK) and lactate dehydrogenase (LDH) levels and againsts cardiac dysfunction and structural alteration in rat[3]. Fosinopril (4.67 mg/kg; p.o.; 4 weeks) suppresses cleaved-caspase 3 expression and myocardial apoptosis in AMI rat model[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	HF post-acute myocardial infarction (AMI) rat model (SPF-grade Sprague-Dawley (SD) rats, 265 ± 15 g) [3]
Dosage:	4.67 mg/kg
Administration:	Oral gavage; 4 weeks
Result:	Inhibited cardiac dysfunction and structural alteration and suppressed apoptosis.

REFERENCES

[1]. Ondetti, M.A., Structural relationships of angiotensin converting-enzyme inhibitors to pharmacologic activity. Circulation, 1988. 77(6 Pt 2): p. I74-8.

[2]. Piepho, R.W., Overview of the angiotensin-converting-enzyme inhibitors. Am J Health Syst Pharm, 2000. 57 Suppl 1: p. S3-7.

[3]. Sharma, S., et al., The hemodynamic effects of long-term ACE inhibition with fosinopril in patients with heart failure. Fosinopril Hemodynamics Study Group. Am J Ther,

1999. 6(4): p. 181-9.

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