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DATASHEET

Captopril

Product overview

Name	Captopril
Cat No	HB3636
Alternative names	CAP
Biological action	Inhibitor
Purity	>98%
Description	ACE and LTA ₄ hydrolase inhibitor

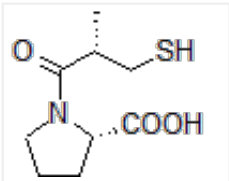
Biological Data

Biological description	Angiotensin-converting enzyme (ACE) inhibitor ($IC_{50} = 0.022\mu M$) which also inhibits LTA ₄ hydrolase in a reversible and competitive manner. Shows antihypertensive and vasodilatory effects Orally active. Recently studied as part of COVID-19 compound repurposing.
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Solubility & Handling

Storage instructions	+4 °C
Solubility overview	Soluble in water (100mM) and in DMSO (100mM)
Handling	In aqueous solution, Captopril undergoes a free radical dimerisation to form captopril disulfide. To delay oxidation, use a lower pH, degas solution, minimize headspace, increase the concentration or incorporate a chelating agent or antioxidant.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	1-[(2S)-3-Mercapto-2-methyl-1-oxopropyl]-L-proline
Molecular Weight	217.29
Chemical structure	
Molecular Formula	C ₉ H ₁₅ NO ₃ S
CAS Number	62571-86-2
PubChem identifier	44093
SMILES	<chem>O=C([C@H](C)CS)N1[C@H](C(=O)O)CCC1</chem>
InChi	InChI=1S/C9H15NO3S/c1-6(5-14)8(11)10-4-2-3-7(10)9(12)13/h6-7,14H,2-5H2,1H3,(H,12,13)/t6-,7+/m1/s1
InChiKey	FAKRSMQSSFJEIM-RQJHMYQMSA-N

Chemical name	1-[(2S)-3-Mercapto-2-methyl-1-oxopropyl]-L-proline
MDL number	MFCD00168073

References

Effects of early captopril treatment and its removal on plasma angiotensin converting enzyme (ACE) activity and arginine vasopressin in hypertensive rats (SHR) and normotensive rats (WKY)

Zhang et al (1996) Clin Exp Hypertens 18(2)

PubMedID [8869001](#)

A SARS-CoV-2 protein interaction map reveals targets for drug repurposing

Gordon et al (2020) Nature doi: 10.1038/s41586-020-2286-9.

PubMedID [32353859](#)

Captopril. An update of its pharmacodynamic and pharmacokinetic properties, and therapeutic use in hypertension and congestive heart failure

Brogden et al (1988) Drugs. 36(5)

PubMedID [3063499](#)
