



Catalog # Aliquot Size

A51-906-1 1 g

A51-906-05 5 g

Captopril

ACE Inhibitor

Catalog # A51-906

Lot # N3365-5

CAS# 62571-86-2

Product Description

Molecular Formula: C₉H₁₅NO₃S

Appearance: White powder

Molecular Weight: 217.3

Purity: >98% (HPLC, TLC); NMR (conforms)

Solubility: May be dissolved in DMSO (20 mg/ml) or water (20 mg/ml)

Alternative name(s)

(2S)-1-(3-mercapto-2-methyl-propionyl)-L-proline

Storage and Stability

Store desiccated as supplied at -20°C for up to 2 years.

Store solutions at -20°C for up to 1 month.

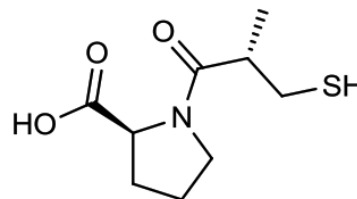
Scientific Background

Angiotensin-converting enzyme (ACE) inhibitor (IC₅₀ = 0.22 μM) (1). Also inhibits the bifunctional Zn²⁺-containing leukotriene A₄ hydrolase/aminopeptidase (LTA₄ hydrolase) reversibly and competitively (K_i = 6.0 μM for leukotriene B₄ formation and K_i = 60 nM for L-lysine-p-nitroanilide) (2). Displays vasodilatory and antihypertensive effects *in vivo*. Clinically useful antihypertensive agent.

References

1. DW Cushman et al. Nat. Med. 1999 5:11102.
2. L Orning et al. J. Biol. Chem. 1991 266:16507.

Molecular Structure



Captopril [NS1]

ACE Inhibitor

Catalog # A51-906

Cas# 62571-86-2

Lot # N3365-5

Purity >98% (HPLC, TLC); NMR (conforms)

Format White powder

Solubility May be dissolved in DMSO (20 mg/ml) or water (20 mg/ml)

Storage & Shipping Store desiccated as supplied at -20°C for up to 2 years. Store solutions at -20°C for up to 1 month. Shipped at ambient temperature.

To place your order, please contact us by phone 1-(604)-232-4600, fax 1-604-232-4601 or by email: orders@signalchem.com or IVD@signalchem.com - www.signalchem.com

FOR IN VITRO RESEARCH PURPOSES ONLY. NOT INTENDED FOR USE IN HUMAN OR ANIMALS.

SAFETY DATA SHEET

Article 1 – Identification of the Substance

Product Name: Captopril**Catalog # A51-906**

This product is sold only for research use by qualified laboratory personnel, and is not to be used as a drug, medical device, food additive, cosmetic, nor household chemical. It is not to be used in diagnostic, therapeutic, consumer, agricultural, nor pesticidal applications.

Manufacturer's Name: SignalChem Biotech Inc.
Street Address: 110-13120 Vanier Place
City, Prov. Postal Code: Richmond, BC, V6V 2J2
Fax: 604-232-4601
EMERGENCY PHONE: 604-232-4600

Article 2 - Hazardous Identification

2.1 Classification of Substance (GHS)

Toxic to Reproduction, Category 1A

Skin Sensitivity, Category 1

Toxic to Aquatic Life, Acute, Category 2

2.2 Label Elements

Classification according to Regulation (EC) No 1272/2008

**GHS Signal Word: DANGER****GHS Hazard Phrases:**

H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.
H401	Toxic to aquatic life.

GHS Precaution Phrases:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases:

P302+352	IF ON SKIN: Wash with plenty of soap and water.
P308+313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

GHS Storage and Disposal Phrases:

Please refer to Section 7 for Storage and Section 13 for Disposal Information

2.3 Other hazards: To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

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SAFETY DATA SHEET

Article 3 – Composition/Information on Ingredients

3.1 Substance

Product Name(s): Captopril
Chemical Name: (2S)-1-(3-mercapto-2-methyl-propionyl)-L-proline
Molecular Formula: C₉H₁₅NO₃S
CAS Number: 62571-86-2
Concentration: 100%

Article 4 – First Aid

4.1 Description of First Aid Measures

General: Move out of dangerous area and contact a doctor. Provide them with this data sheet.

After Inhalation: Supply fresh air and be sure to call for a doctor. In case of unconsciousness, place patient stably in side position for transportation.

After Skin Contact: Immediately wash with water and soap and rinse thoroughly.

After Eye Contact: Rinse open eye for several minutes under running water.

After Swallowed: If symptoms persist, call a doctor.

4.2 Important Symptoms and Effects: May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects.

Article 5 – Fire Fighting Measures

5.1 Extinguishing Media

Use fire-fighting measures that suit the environment. A solid water stream may be inefficient

5.2 Special Hazards

No further relevant information available.

5.3 Precautions for Fire Fighters

No special measures required.

Article 6 – Accidental Release Measures

6.1 Personal Precautions

Not required.

6.2 Environmental Precautions

Do not allow to enter sewers/surface or ground water.

6.3 Methods for Containment and Clean-up

Dispose contaminated material as waste according to item 13.

Article 7 – Handling and Storage

7.1 Handling Precautions

No special precautions are necessary if used correctly. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid prolonged or repeated exposure. Keep away from sources of ignition. Take precautionary measures against static discharge.

7.2 Safe Storage Measures

No special requirements.

Article 8 – Exposure Controls/Personal Protection

8.1 Control Parameters

Contains no substances with occupational exposure limit values.

8.2 Specific Engineering Controls

Keep airborne levels low by using a fumehood or local exhaust.

8.3 Personal Protection

Eye/Face Protection: Use safety glasses.

Skin Protection: Use chemical resistant gloves. Remove and dispose of gloves properly after use. Wash hands thoroughly after use.

Body Protection: Wear a lab coat.

Respiratory Protection: If risk is present wear a dust respirator.

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SAFETY DATA SHEET

Article 9 – Physical and Chemical Properties

Appearance: White powder
Odour: data not available
Odour Threshold: data not available
pH: data not available
Melting/Freezing Pt: data not available
Boiling Pt: data not available
Flash Pt: data not available
Explosive Properties: data not available
Solubility notes: May be dissolved in DMSO (20 mg/ml) or water (20 mg/ml)

Article 10 – Stability and Reactivity

10.1 Stability: Stable under recommended transport or storage conditions
10.2 Conditions to Avoid: No further relevant information available.
10.3 Incompatibility – Materials to Avoid: Strong oxidizing agents
10.4 Hazardous Decomposition Products: Carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides

Article 11– Toxicological Information

11.1 Toxicological Effects: The toxicological effects of this product have not been thoroughly studied.
Acute Toxicity: Oral LD50 (rat): 4,245 mg/kg; Oral LDLO (man, intermittent): 2,500 ug/kg/3D; Oral TDLO (woman): 10 mg/kg; Subcutaneous LD50: >2,400 mg/kg (mouse), >600 mg/kg (rat); Intravenous LD50: 663 mg/kg (mouse), 554 mg/kg (rat).
Chronic Toxicity: Investigated as a drug.
For complete information, see Registry of Toxic Effects of Chemical Substances (RTECS) entry. Captopril RTECS Number: UY0550000
Skin Corrosion/Irritation: data not available
Eye Damage/Irritation: data not available
Respiratory or Skin Sensitization: data not available
Germ Cell Mutagenicity: data not available
Carcinogenicity: None according to NIOSH

Article 12 – Ecological Information

12.1 Toxicity
Avoid release into the environment.
12.2 Degradability
Data not available

Article 13 – Disposal Considerations

13.1 Waste Treatment
Product and Contaminated Packaging: Dispose according to national legislation. Contact a licensed chemical disposal company.

Article 14 – Transport Information

14.1 DOT
Not dangerous goods
14.2 IMDG
Not dangerous goods
14.2 IATA
Not dangerous goods

Article 15 – Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Article 16 – Other Information

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SignalChem shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalog for additional terms and conditions of sale.

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