

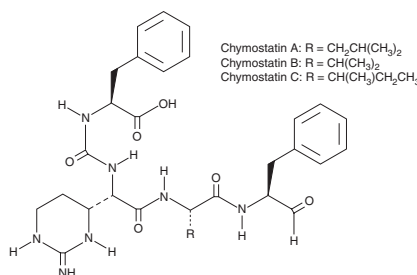
PRODUCT INFORMATION



Chymostatin

Item No. 15114

CAS Registry No.: 9076-44-2
MF: $C_{31}H_{41}O_6N_7$
FW: 607.7
Purity: $\geq 95\%$ (a mixture of A, B, C)
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Chymostatin is supplied as a crystalline solid. A stock solution may be made by dissolving the chymostatin in the solvent of choice, which should be purged with an inert gas. Chymostatin is soluble in the organic solvent DMSO at a concentration of approximately 10 mg/ml.

Chymostatin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, chymostatin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Chymostatin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Chymostatin is a bioactive peptide of microbial origin that acts as a protease inhibitor with selectivity for chymotrypsin-like serine proteases.¹ It potently inhibits chymotrypsin and chymase ($K_i = 9.36$ and 13.1 nM, respectively) while less effectively blocking the activity of cathepsins, papain, and leukocyte elastase.¹⁻⁵ It is without effect on trypsin, thrombin, plasmin, pepsin, and kallikrein.¹

References

1. Umezawa, H., Aoyagi, T., Morishima, H., *et al.* Chymostatin, a new chymotrypsin inhibitor produced by actinomycetes. *J. Antibiot. (Tokyo)* **23(8)**, 425-427 (1970).
2. Akahoshi, F., Ashimori, A., Sakashita, H., *et al.* Synthesis, structure-activity relationships, and pharmacokinetic profiles of nonpeptidic difluoromethylene ketones as novel inhibitors of human chymase. *J. Med. Chem.* **44(8)**, 1297-1304 (2001).
3. Feinstein, G., Malemud, C.J., and Janoff, A. The inhibition of human leucocyte elastase and chymotrypsin-like protease by elastatinal and chymostatin. *Biochim. Biophys. Acta.* **429(3)**, 925-932 (1976).
4. Stein, R.L. and Strimpler, A.M. Slow-binding inhibition of chymotrypsin and cathepsin G by the peptide aldehyde chymostatin. *Biochemistry* **26(9)**, 2611-2615 (1987).
5. Yamamoto, K., Takeda, M., and Kato, Y. Characteristics of activation of cathepsin B by sodium salicylate and comparison of catalytic site properties of cathepsins B and H. *Jpn. J. Pharmacol.* **39(2)**, 207-215 (1985).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 09/29/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM