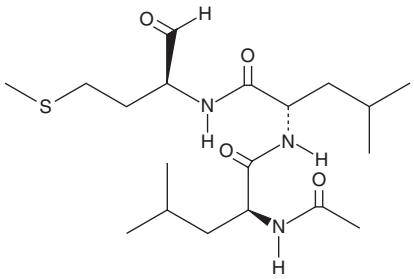
PRODUCT INFORMATION

Calpain Inhibitor II

Item No. 15994

CAS Registry No.: 110115-07-6
Formal Name: N-acetyl-L-leucyl-N-[(1S)-1-formyl-3-(methylthio)propyl]-L-leucinamide
Synonyms: Ac-Leu-Leu-Met-H, ALLM
MF: $C_{19}H_{35}N_3O_4S$
FW: 401.6
Purity: ≥98%
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

Calpain inhibitor II is supplied as a crystalline solid. A stock solution may be made by dissolving the calpain inhibitor II in the solvent of choice, which should be purged with an inert gas. Calpain inhibitor II is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of calpain inhibitor II in these solvents is approximately 20 mg/ml.

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

Description

Calpain inhibitor II is a cell permeable, peptide aldehyde inhibitor of calpain I (K_i = 120 nM), calpain II (K_i = 230 nM), cathepsin B (K_i = 100 nM), and cathepsin L (K_i = 0.6 nM).[1] It has been used to demonstrate the involvement of ubiquitin-proteasome protein degradation in various biological systems.[2,3]

References

1. Sasaki, T., Kishi, M., Saito, M., *et al.* Inhibitory effect of di- and tripeptidyl aldehydes on calpains and cathepsins. *J. Enzyme Inhib.* **3(3)**, 195-201 (1990).
2. Ravid, T., Doolman, R., Avner, R., *et al.* The ubiquitin-proteasome pathway mediates the regulated degradation of mammalian 3-hydroxy-3-methylglutaryl-coenzyme A reductase. *J. Biol. Chem.* **275(46)**, 35840-35847 (2000).
3. Stangl, V., Lorenz, M., Meiners, S., *et al.* Long-term up-regulation of eNOS and improvement of endothelial function by inhibition of the ubiquitin-proteasome pathway. *FASEB J.* **18(2)**, 272-279 (2004).

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, 12/19/2022

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