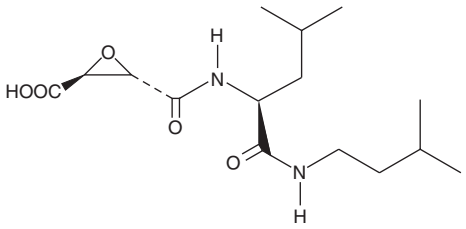
PRODUCT INFORMATION

E-64c

Item No. 10007964

CAS Registry No.:	76684-89-4
Formal Name:	(2S,3S)-3[[(1S)-3-methyl-1-[[(3-methylbutyl)amino]carbonyl]butyl]amino]carbonyl]-oxiranecarboxylic acid
Synonyms:	Loxistatin Acid, NSC 694279
MF:	$C_{15}H_{26}N_2O_5$
FW:	314.4
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

E-64c is supplied as a crystalline solid. A stock solution may be made by dissolving the E-64c in the solvent of choice, which should be purged with an inert gas. E-64c is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of E-64c in ethanol and DMF is approximately 30 mg/ml and approximately 20 mg/ml for DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of E-64c can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of E-64c in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

E-64c is an active metabolite of the protease inhibitor E-64d (Item No. 13533).[1-4] E-64c inhibits the cysteine proteases cathepsin B, cathepsin H, and papain but not the serine proteases trypsin, chymotrypsin, or elastase.[5,6] It reduces the autocatalytic activity of the foot-and-mouth-disease virus (FMDV) leader protease when used at concentrations ranging from 0.1 to 1 mg/ml.[3] E-64c reduces infection of HEK293T cells by an HIV-based virus system pseudotyped with severe acute respiratory syndrome coronavirus (SARS-CoV) surface glycoprotein, also known as the spike glycoprotein, in a concentration-dependent manner.[4]

References

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3. Kleina, L.G. and Grubman, M.J. *J. Virol.* **66(12)**, 7168-7175 (1992).
4. Simmons, G., Gosalia, D.N., Rennekamp, A.J., *et al. Proc. Natl. Acad. Sci. USA* **102(33)**, 11876-11881 (2005).
5. Barrett, A.J., Kembhavi, A.A., Brown, M.A., *et al. Biochem. J.* **201(1)**, 189-198 (1982).
6. Tamai, M., Matsumoto, K., Omura, S., *et al. J. Pharmacobiodyn.* **9(8)**, 672-677 (1986).

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