Specification

Chymostatin A2144

additional product description	Mixture of 3 Isomers: (S)-N-[(S)-1-Carboxy-2-phenylethylcarbamoyl]-α-[(S)-2-imino-4-piperidinyl]-glycyl-X-phenylalaninal with X = L-Leu / X = L-Ile / X = L-Val
CAS-No.:	9076-44-2
HS-No.:	29419000
Storage:	-20°C
LGK:	10 - 13
WGK:	1
Specification	
Activity (IC50)	approx. 0.3 µg/ml

Literature

(1) Umezawa, H. *et al.* (1970) *J. Antibiotics* **23**, 425-427 Chymostatin, a new Chymotrypsin inhibitor produced by actinomycetes.
(2) Umezawa, H. (1976) *Methods Enzymol.* **45**, 678-695 Structures and activities of protease inhibitors of microbial origin.

Comment

Chymostatin was isolated from *Streptomyces hygroscopicus* (1. 2). It reversibly inhibits serine and cysteine proteases, like α-, β-, γ- and δ-chymotrypsin (ID_{50} = 0.15 µg/ml), cathepsin A (ID_{50} = 62.5 µg/ml), cathepsin B (ID_{50} = 2.6 µg/ml) and cathepsin D (ID_{50} = 49.0 µg/ml) and papain (ID_{50} = 7.5 µg/ml). The effective concentration ranges from 10 to 100 µM (corresponding to 6 - 60 µg/ml). Chymostatin may be dissolved in acetic acid or DMSO, it is of low solubility in water, methanol and ethanol, insoluble in ethyl acetate, ether, hexane or chloroform (1, 2).