

Specification

**Chymostatin**

**A2144**

<b>Physical Description:</b>	Solid
<b>Product Code:</b>	A2144
<b>Product Name:</b>	Chymostatin
<b>Short Description:</b>	additional product description: Mixture of 3 Isomers: (S)-N-[(S)-1-Carboxy-2-phenylethylcarbamoyl]- $\alpha$ -[(S)-2-imino-4-piperidinyl]-glycyl-X-phenylalaninal with X = L-Leu / X = L-Ile / X = L-Val
<b>Specifications:</b>	Activity (IC <sub>50</sub> ): approx. 0.3 $\mu$ g/mL
<b>WGK:</b>	1
<b>Storage:</b>	-20°C
<b>CAS:</b>	9076-44-2
<b>CS:</b>	29419000
<b>Comment</b>	Chymostatin was isolated from <i>Streptomyces hygroscopicus</i> (1, 2). It reversibly inhibits serine and cysteine proteases, like $\alpha$ -, $\beta$ -, $\gamma$ - and $\delta$ -chymotrypsin (ID <sub>50</sub> = 0.15 $\mu$ g/ml), cathepsin A (ID <sub>50</sub> = 62.5 $\mu$ g/ml), cathepsin B (ID <sub>50</sub> = 2.6 $\mu$ g/ml) and cathepsin D (ID <sub>50</sub> = 49.0 $\mu$ g/ml) and papain (ID <sub>50</sub> = 7.5 $\mu$ g/ml). The effective concentration ranges from 10 to 100 $\mu$ M (corresponding to 6 - 60 $\mu$ g/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).
<b>Bibliography</b>	(1)Umezawa, H. <i>et al.</i> (1970) <i>J. Antibiotics</i> <b>23</b> , 425-427Chymostatin, a new Chymotrypsin inhibitor produced by actinomycetes. (2)Umezawa, H. (1976) <i>Methods Enzymol.</i> <b>45</b> , 678-695Structures and activities of protease inhibitors of microbial origin.

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