

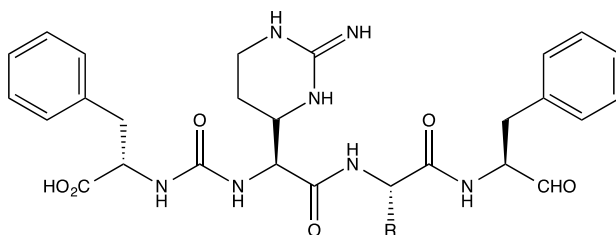
Catalog # 10-2722

Chymostatin

9076-44-2

[(S)-1-Carboxy-2-phenylethyl]-carbamoyl-a-[2-amidohexahydro-4(S)-pyrimidyl]-(S)-glycyl-[A= Leu, B=Val, C=Ile]-phenylalaninal

Lot # X101433



Chymostatin A R=CH₂CH(CH₃)₂
Chymostatin B R=CH(CH₃)₂
Chymostatin C R=CH(CH₃)CH₂CH₃

A potent, competitive, slow-binding inhibitor of α -, β -, γ -, δ -chymotrypsin, papain and cathepsins B/G (chymotrypsin-like serine proteases)¹, $K_i=9.36$ and 13.1 nM for chymotrypsin and chymase². Cathepsin G $K_i=0.15$ μ M.³ Consists of a mixture of type A (L-Leu), B (L-Val) and C (L-Ile) forms.¹ Decreases plasma and tissue levels of angiotensin II without lowering mean blood pressure in a hypertensive rat model.⁴ Commonly used in lysis buffers to prevent degradation of proteins. Typical working concentration is 6-60 μ g/ml.

- 1) Umezawa *et al.* (1970), *Chymostatin, a new chymotrypsin inhibitor produced by actinomycetes*; J. Antibiot.(Tokyo) **23** 425
- 2) Johnson *et al.* (1998), *Inactivation of chymotrypsin and human skin chymase: kinetics of time-dependent inhibition in the presence of substrate*; Biochim.Biophys.Acta **953** 269
- 3) Stein and Strimpler (1987), *Slow-binding of chymotrypsin and cathepsin G by the peptide aldehyde chymostatin*; Biochemistry **26** 2611
- 4) Roszkowska-Chojecka *et al.* (2015), *Effects of chymostatin, a chymase inhibitor, on blood pressure, plasma and tissue angiotensin II, renal haemodynamics and renal excretion in two models of hypertension in the rat*; Exp. Physiol. **100** 1093

PHYSICAL DATA

Molecular Weight:	605.0 (average)
Molecular Formula:	C ₃₁ H ₄₁ N ₇ O ₆
Purity:	>96% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 20 mg/ml)
Physical Description:	White to Off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 1 month.

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