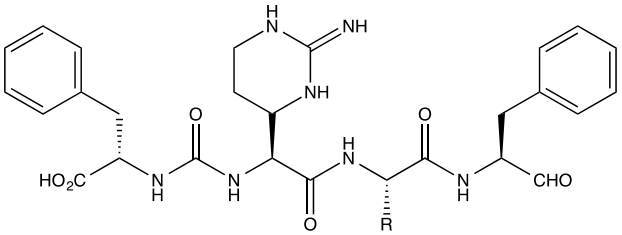
Catalog # 10-2722
Chymostatin

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=$CH_2CH(CH_3)_2$
Chymostatin B R=$CH(CH_3)_2$
Chymostatin C R=$CH(CH_3)CH_2CH_3$

A potent, competitive, slow-binding inhibitor of α-, β-, γ-, δ-chymotrypsin, papain and cathepsins B/G (chymotryptase-like serine proteases)[1], K_i=9.36 and 13.1 nM for chymotrypsin and chymase[2]. Cathepsin G K_i=0.15 μM.[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 μg/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:	$C_{31}H_{41}N_7O_6$
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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