

Catalog Number: CM00430

## 产品信息

**Catalog Number:**  
CM00430

**CAS号:**  
26305-03-3

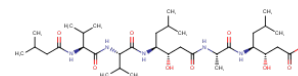
**分子式:**  
 $C_{34}H_{63}N_5O_9$

**主要靶点:**  
Amino Acids and  
Derivatives|Autophagy|Proteasome|HIV  
Protease

**主要通路:**  
蛋白酶体|微生物学|代谢|自噬|泛素  
化

**分子量:**  
685.89

**溶解度:**  
DMSO:25  
mg/mL,H<sub>2</sub>O:Insoluble,Ethanol:1  
mg/mL (1.46 mM)



## 靶点活性

hemoglobin-proctase:6.2 nM|hemoglobin-pepsin:4.5 nM|Hemoglobin-acid protease:260 nM|casein-pepsin:150 nM|casein-acid protease:520 nM|casein-proctase:290 nM

## 体外活性

Pepstatin is a specific acid protease inhibitor with IC<sub>50</sub>s of 4.5 nM, 6.2 nM, 150 nM, 290 nM, 520 nM and 260 nM for hemoglobin-pepsin, hemoglobin-proctase, casein-pepsin, casein-proctase, casein-acid protease, and hemoglobin-acid protease, respectively [1]. Pepstatin inhibits the recombinant HIV protease (IC<sub>50</sub>: 250  $\mu$  M). Pepstatin shows no effect on cellular protein synthesis and probably does not exert severe cell toxicity [2].

## 体内活性

Pepstatin has very low toxicity, with LD<sub>50</sub>s of 1090 mg/kg, 875 mg/kg, 820 mg/kg and 450 mg/kg for mice, rats, rabbits, and dogs by i.p. route, and > 2000 mg/kg for all species by the oral route. Pepstatin (0.5-50 mg/kg, p.o.) suppresses stomach ulceration of the pylorus in ligated Shay rats [1]. The bacterial motility in the pepstatin-treated gastric juice was measured at the pH values of 2.0, 3.0, 4.0, 4.5, and 5.0 (n = 5 for each pH). The bacteria remained motile significantly longer than in the in vivo experiments without pepstatin [4].

## 动物实验

To investigate the effect of pepsins on bacterial motility, similar experiments were performed, but the pepsin in the stomach was inactivated by rinsing the stomach with pepstatin (100  $\mu$  l of a 2-mg/ml stock solution). Samples were taken and analyzed for bacterial motility at the test pH values of 2.0, 3.0, 4.0, 4.5, and 5.0 and at the same periods after application of the bacterial suspension as in the experiments with active pepsins [4].

## 细胞实验

Pepstatin A is freshly dissolved in DMSO at 7 mM. It is very slowly diluted (1:100) into the medium of HIV-infected H9 suspension cultures so that no pepstatin A precipitated (final concentration, 70  $\mu$  M pepstatin A and 1% DMSO), and the cultures are incubated without change of culture medium for 48 hr. As a control, uninfected H9 cells are also incubated with pepstatin and in addition HIV infected and uninfected cells are incubated with 1% DMSO but without pepstatin [2].

## 描述

Pepstatin is a specific aspartic proteases inhibitor produced by actinomycetes, and inhibits the aspartic proteases cathepsin D, pepsin and renin.

## 储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years