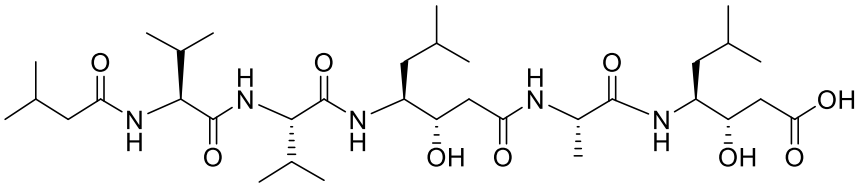
bioaustralis
fine chemicals

PRODUCT DATA SHEET

Pepstatin A

Code No.: **BIA-P2467**

Pack sizes: **0.1 mg, 0.5 mg**



Synonyms : Ahpatinin C, NSC 272671, Pepsin inhibitor S 735A
Pepstatin, Procidin S 735A

Specifications

CAS #	:	**26305-03-3**
Molecular Formula	:	**$C_{34}H_{63}N_5O_9$**
Molecular Weight	:	**685.89**
Source	:	***Actinomyces* sp.**
Appearance	:	**White solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in methanol or DMSO**

Application Notes

Pepstatin A, a pentapeptide isolated from Streptomyces sp. is a strong inhibitor of aspartyl proteases such as pepsin, cathepsin D, and renin. Pepstatin is active against HIV-1 and Plasmodium falciparum. HIV-infected H9 cells incubated with pepstatin A at 10-4M for 2, 4 or 10 days had significantly reduced HIV core antigen (p24) and no infectious HIV. Pepstatin A exerts its antimalarial activity via P. falciparum plasmepsin II binding sites. Pepstatin A suppresses NF-κB ligand (RANKL)-induced osteoclast differentiation and decreases the expression of nuclear factor of activated T cells c1 (NFATc1), suggesting that suppresses the differentiation of osteoclasts through the blockade of ERK signaling and the inhibition of NFATc1 expression.

References

1. Pepstatin, a new pepsin inhibitor produced by Actinomycetes. Umezawa H. et al. J Antibiot. 1970, XXIII, 259.
2. Inhibition of HIV replication in cell culture by the specific aspartic protease inhibitor pepstatin A. von der Helm K. et al. FEBS Lett. 1989, 247, 349.
3. Potencies of human immunodeficiency virus protease inhibitors in vitro against Plasmodium falciparum and in vivo against murine malaria. Andrews K.T. et al. Atnimicrob Agents Chemother. 2006, 50, 639.
4. Pepstatin A, an aspartic proteinase inhibitor, suppresses RANKL-induced osteoclast differentiation. Yoshida Y. et al. J Biochem. 2006, 139, 583.

Updated: 11 June 2021

Building C, 28-54 Percival Road, Smithfield, NSW 2164, AUSTRALIA
Tel: 61 2 9757 4515 Fax: 61 2 9757 2586 Web: www.bioaustralis.com Email: info@bioaustralis.com