



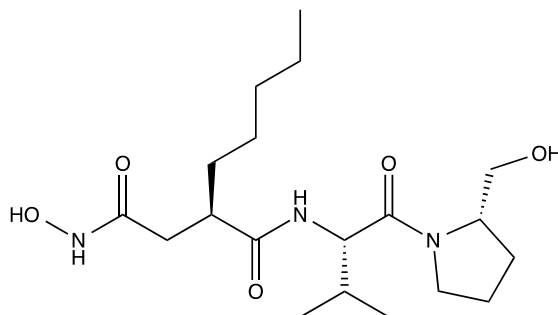
Catalog # 10-2549

Actinonin

13434-13-4

3-[[1-[-2-Hydroxymethyl)-1-pyrrolidinyl]carbonyl]-2-methylpropyl]carbonyl]-octanohydroxamic acid

Lot # X101626



A potent hydroxamic acid inhibitor of aminopeptidases which displays analgesic effects by inhibiting enkephalin-degrading enzymes.¹ Also inhibits peptide deformylase.² Induces apoptosis and displays antitumor activity *in vivo*.³ Inhibits neutrophil collagenase and other MMPs.⁴ Induces mitochondrial proteotoxicity.⁵

- 1) Hachisu *et al.* (1987), *Analgesic effect of actinonin, a new potent inhibitor of multiple encephalin degrading enzymes*; Life Sci., **41** 235
- 2) Lee *et al.* (2004), *Human mitochondrial peptide deformylase, a new anticancer target of actinonin-based antibiotics*; J. Clin. Invest., **114** 1107
- 3) Xu *et al.* (1998), *Antitumor activity of actinonin in vitro and in vivo*; Clin. Cancer Res., **4** 171
- 4) Sina *et al.* (2009), *Cell-based evidence for aminopeptidase N/CD13 inhibitor actinonin targeting of MT1-MMP-mediated pro-MMP-2 activation*; Cancer Lett., **279** 171
- 5) Burman *et al.* (2017) *Mitochondrial fission facilitates the selective mitophagy of protein aggregates*; J. Cell. Biol., **216** 3231

PHYSICAL DATA

Molecular Weight:	385.51
Molecular Formula:	C ₁₉ H ₃₅ N ₃ O ₅
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 25 mg/ml) or Ethanol (up to 20 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 2 months.

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