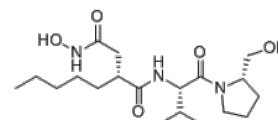


<b>Product Name</b>	: Actinonin
<b>Cat. No.</b>	: PC-20620
<b>CAS No.</b>	: 13434-13-4
<b>Molecular Formula</b>	: C <sub>19</sub> H <sub>35</sub> N <sub>3</sub> O <sub>5</sub>
<b>Molecular Weight</b>	: 385.50
<b>Target</b>	: Aminopeptidase
<b>Solubility</b>	: 10 mM in DMSO



CAS: 13434-13-4

## Biological Activity

Actinonin is an isolated antibiotic and shown to be an inhibitor of aminopeptidase M, inhibits enkephalin-degrading enzymes from guinea-pig striatum (enkephalin-aminopeptidase), striatal membrane neutral endopeptidase and soluble dipeptidylaminopeptidase in rat whole brain homogenate with IC<sub>50</sub> of 0.39, 5.6 and 1.1 μM, respectively.

Actinonin administered intracisternally (i.cist., 50 micrograms) or intraperitoneally (i.p., 100 mg/kg), potentiated the analgesic action of met-enkephalin (50 micrograms i.cist.) analgesia by a tail-flick test.

Actinonin is a potent reversible peptide deformylase (PDF) inhibitor with K<sub>i</sub> of 0.28 nM. inhibits MMP-1, MMP-3, MMP-8, MMP-9, and hmeprin α with K<sub>i</sub> values of 300 nM, 1,700 nM, 190 nM, 330 nM, and 20 nM, respectively.

Actinonin inhibits cell growth in various human tumor cell lines. The IC<sub>50</sub> of 4, 6.9, 12.8, 16.6, 27.4, 15.7 and 49.3 μM for Raji cells, MDA-MB-468 cells, PC3 cells, SK-LC-19 cells, Hela cells, HT-1080 cells and AL67 cells, respectively.

Actinonin is active against Gram-positive bacteria, including *S. aureus* (MIC value of 8-16 μg/mL), *Streptococcus pyogenes* (MIC value of 8 μg/mL) and *Streptococcus epidermidis* (MIC value of 2-4 μg/mL).

## References

Umezawa H, et al. J Antibiot (Tokyo). 1985 Nov;38(11):1629-30.

Hachisu M, et al. Eur J Pharmacol. 1987 May 7;137(1):59-65.

**Caution: Product has not been fully validated for medical applications. Lab Use Only!**

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