

# PRODUCT INFORMATION



## Antipain (hydrochloride)

Item No. 26705

**CAS Registry No.:** 37682-72-7  
**Formal Name:** N<sup>2</sup>-[[[(1S)-1-carboxy-2-phenylethyl]amino]carbonyl]-L-arginyl-N-[4-[(aminoiminomethyl)amino]-1-formylbutyl]-L-valinamide, dihydrochloride

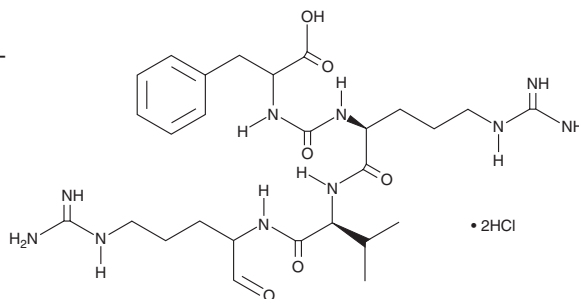
**MF:** C<sub>27</sub>H<sub>44</sub>N<sub>10</sub>O<sub>6</sub> • 2HCl  
**FW:** 677.6

**Purity:** ≥95%

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Antipain (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the antipain (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Antipain (hydrochloride) is soluble in organic solvents such as ethanol and DMSO. It is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

### Description

Antipain is a protease inhibitor originally isolated from actinomycetes.<sup>1</sup> It inhibits thrombokinase, plasmin, trypsin, and papain *in vitro* (IC<sub>50</sub>s = 20, 93, 0.26, and 0.16 µg/ml, respectively). Antipain (6-600 µg/ml) inhibits the morphological transformation of and increases frequency of chromosomal aberrations in Syrian hamster embryo cells induced by N-methyl-N'-nitro-N-nitrosoguanidine (MNNG).<sup>2</sup> *In vivo*, antipain (25-100 mg/kg) suppresses urethan-induced formation of cleft palates and cleft lips in mice.<sup>3</sup>

### References

1. Suda, H., Aoyagi, T., Hamada, M., *et al.* Antipain, a new protease inhibitor isolated from actinomycetes. *J. Antibiot. (Tokyo)* **25(4)**, 263-266 (1972).
2. DiPaolo, J.A., Amsbaugh, S.C., and Popescu, N.C. Antipain inhibits N-methyl-N'-nitro-N-nitrosoguanidine-induced transformation and increases chromosomal aberrations. *Proc. Natl. Acad. Sci. U.S.A.* **77(11)**, 6649-6653 (1980).
3. Nomura, T., Enomoto, T., Shibata, K., *et al.* Antiteratogenic effects of tumor inhibitors, caffeine, antipain, and retinoic acid in mice. *Cancer Res.* **43(11)**, 5156-5162 (1983).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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