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# Certificate of Analysis

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**Product Name:** **Leupeptin hemisulfate** **Catalog No.: 1167** **Batch No.: 28**

CAS Number: 103476-89-7

## 1. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Batch Molecular Formula:** | $C_{20}H_{38}N_6O_4.½H_2SO_4$ |
| **Batch Molecular Weight:** | 475.6 |
| **Physical Appearance:** | White solid |
| **Solubility:** | Soluble to 10 mg/ml in water |
| **Storage:** | Store at -20°C |
| **Peptide Sequence:** | Ac-Leu-Leu-Arginal.$½H_2SO_4$ |

## 2. ANALYTICAL DATA

| | |
|---|---|
| **HPLC:** | Shows 97.9% purity |
| **Mass Spectrum:** | Consistent with structure |



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**Product Name:** **Leupeptin hemisulfate** **Catalog No.: 1167** **Batch No.: 28**

CAS Number: 103476-89-7

**Description:**

Leupeptin hemisulfate is a reversible inhibitor of trypsin-like and cysteine proteases such as calpain. Shown to inhibit activation-induced programmed cell death.

**Physical and Chemical Properties:**

Batch Molecular Formula: $C_{20}H_{38}N_6O_4.½H_2SO_4$

Batch Molecular Weight: 475.6

Physical Appearance: White solid

**Peptide Sequence:**

Ac-Leu-Leu-Arginal.$½H_2SO_4$

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 10 mg/ml in water

This peptide is supplied in gross weight.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such Cys, Met,Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

**References:**

**Sarin** *et al* (1994) Inhibition of activation-induced programmed cell death and restoration of defective immune responses of HIV+ donors by cysteine protease inhibitors. J.Immunol. ***153*** 862. PMID: 8021517.

**Mehdi** (1991) Cell-penetrating inhibitors of calpain. TiBS ***16*** 150. PMID: 1877091.

**Wang** (1990) Developing selective inhibitors of calpain. TiPS ***11*** 139. PMID: 2185586.