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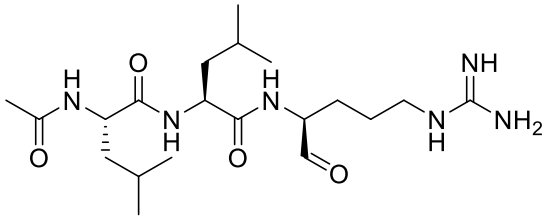
PRODUCT DATA SHEET

Leupeptin

Code No.: **BIA-L2465**

Pack sizes: **0.25 mg, 1 mg**



Synonyms : L-leucinamide, Acetyl-L-leucyl-L-leucyl-L-argininal, N-acetyl-L-leucyl-L-leucyl-L-argininal

Specifications

CAS #	:	**55123-66-5**
Molecular Formula	:	**$C_{20}H_{38}N_6O_4$**
Molecular Weight	:	**426.55**
Source	:	***Streptomyces* sp.**
Appearance	:	**White solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in methanol or DMSO**

Application Notes

Leupeptin, a tripeptide isolated from Streptomyces sp. with a structure of Ac-L-Leu-L-Leu-L-Argal, was reported as a strong inhibitor of trypsin-family proteases in 1969. Leupeptin is active against various proteases, including papain, trypsin, plasmin, kallikrein (IC50 0.086, 0.22, 1.0 and 1.0 x 10-5M, respectively), as well as serine potease, calpain and cathepsin B. Leupeptin strongly inhibits the differentiation of the opportunitstic mycosis, Scedosporium apiospermum.

References

1. Leupeptins, new protease inhibitors from actinomycetes. Aoyagi T. et al. J Antibiot. 1969, 22, 283.
2. Protease inhibitory activity of leupeptin analogues. Sainoet T. al. J Antibiot. 1988, XLI, 220.
3. Metallopeptidase inhibitors arrest vital biological processes in the fungal pathogen Scedosporium apiospermum. Silva B.A. et al. Mycoses 2009, 54, 105.
4. The slow, tight-binding inhibition of cathepsin B by leupeptin. A hysteretic effect. Baici A. & Gyger-Marazzi M. Eur J Biochem. 1982, 129, 33.

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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