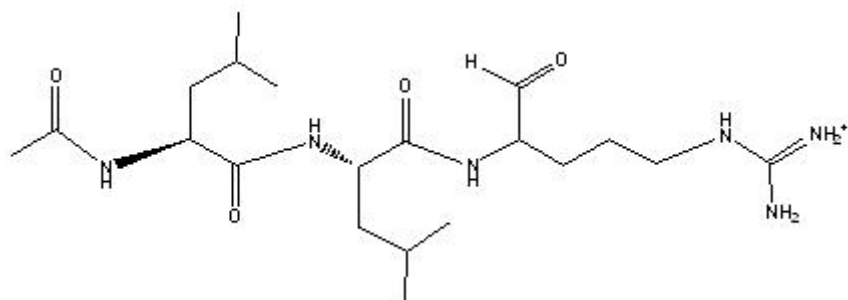


TECHNICAL INFORMATION

Catalog Number: 151553, 195623, 195624

Leupeptin

Structure:



	Hemisulfate	Trifluoroacetate Salt	Hydrochloride
Molecular Formula	$C_{20}H_{38}N_6O_4 \cdot \frac{1}{2}H_2SO_4$	$C_{20}H_{38}N_6O_4 \cdot C_2HF_3O_2$	$C_{20}H_{38}N_6O_4 \cdot HCl$
Molecular Weight	475.6	540.6	463.0
CAS #	103476-89-7	147385-61-3	24125-16-4

Synonym: Acetyl-Leu-Leu-Arg-al

Physical Description: White to off-white powder

Solubility: Soluble in water (50 mg/ml-clear, faint yellow solution). Stock solutions of 10 mM in water are stable for 1 week at 4°C and 1 month if aliquoted and stored at -20°C. Stock solutions can then be diluted 1:100 to make a 100 uM working solution. Working solutions are stable for only a few hours.

Description: A modified tripeptide reversible protease inhibitor of trypsin-like proteases and some cysteine proteases¹² including endoproteinase Lys-C, kallikrein, papain, thrombin, cathepsin B⁶, cathepsins H and L¹⁴, trypsin, calpain¹³, trypsin⁸ and plasmin. Effective concentration is typically 10-100 uM. Little to no inhibition is seen against pepsin, cathepsins A and D and alpha-chymotrypsin. When adjusted for molarity, all three salt forms are equally effective; however, the hydrochloride salt is usually less invasive in biological settings.

Leupeptin, because of its aldehyde group, may act as a reducing agent and therefore interfere in protein determinations such as Lowry and, to a lesser extent, Bradford.⁹

Note: Leupeptin gives multiple peaks on HPLC due to equilibria among three forms in solution. Purity determined by HPLC should take into account the three main peaks.¹¹ Majority of contaminating peptide is racemized leupeptin.

The primary mechanism of inactivation is racemization of the L-arginal; the D-arginal form is totally inactive. If the aldehyde is oxidized but retains its L-configuration, the resulting compound does have some inhibitory activity.

Availability:

Catalog Number	Description	Size
151553	Leupeptin Hemisulfate	0.5 mg 1 mg 5 mg 25 mg 100 mg
195623	Leupeptin Trifluoroacetate salt	1 mg 5 mg 25 mg
195624	Leupeptin Hydrochloride	1 mg 5 mg 25 mg 100 mg

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