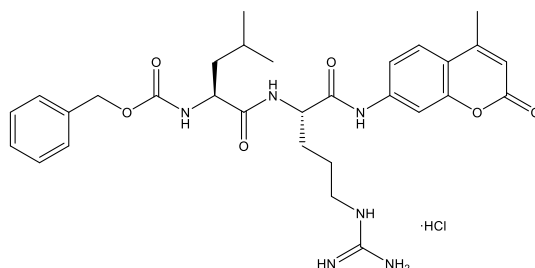


Catalog # 10-5386
Z-Leu-Arg-AMC · HCl
 CAS# 156192-32-4
 Z-LR-AMC; CBZ-Leu-Arg-AMC, hydrochloride
 Lot # X105623



Sensitive Cathepsin K fluorogenic substrate ($K_m=8\mu\text{M}$, $k_{\text{cat}}/K_m=4 \times 10^5 \text{ M}^{-1}\text{s}^{-1}$)¹⁻³. It is cleaved more slowly by the following cathepsins (k_{cat}/K_m : B (10^5)⁴, F (10^6)⁴, L (10^6)^{4,5}, L2/V (10^4)⁵, S (10^5)^{2,4,5}). Also cleaved by malaria parasite proteases berghepain⁶, vivapain-2 and -3⁷, and falcipain-1, -2, and -3^{6,8,9}. Excitation: 365nm, Emission: 440nm.

- 1) Bossard *et al.* (1996), *Proteolytic activity of human osteoclast cathepsin K. Expression, purification, activation, and substrate identification*; J. Biol. Chem. **271** 12517
- 2) Brömme *et al.* (1996), *Human cathepsin O2, a matrix protein-degrading cysteine protease expressed in osteoclasts. Functional expression of human cathepsin O2 in Spodoptera frugiperda and characterization of the enzyme*; J. Biol. Chem. **271** 2126
- 3) Linnevers *et al.* (1997), *Expression of human cathepsin K in Pichia pastoris and preliminary crystallographic studies of an inhibitor complex*; Protein Sci. **6** 919
- 4) Wang *et al.* (1998), *Human cathepsin F. Molecular cloning, functional expression, tissue localization, and enzymatic characterization*; J. Biol. Chem., **273** 32000
- 5) Brömme *et al.* (1999), *Human cathepsin V functional expression, tissue distribution, electrostatic surface potential, enzymatic characterization and chromosomal localization*; Biochemistry, **38** 2377
- 6) Singh *et al.* (2007), *A chimeric cysteine protease of Plasmodium berghei engineered to resemble the Plasmodium falciparum protease falcipain-2*; Protein Eng. Des. Sel. **20** 171
- 7) Na *et al.* (2004), *Identification and biochemical characterization of vivapains, cysteine proteases of the malaria parasite Plasmodium vivax*; Biochem. J. **378**(Pt2) 529
- 8) Goh *et al.* (2005), *Cysteine protease falcipain 1 in Plasmodium falciparum is biochemically distinct from its isozymes*; Parasitol. Res. **97** 295
- 9) Pandey *et al.* (2004), *Independent intramolecular mediators of folding, activity, and inhibition for the Plasmodium falciparum cysteine protease falcipain-2*; J. Biol. Chem. **279** 3484

PHYSICAL DATA

Molecular Weight: 615.13
 Molecular Formula: C₃₀H₃₈N₆O₆ · HCl
 Purity: >97% by HPLC
 Amino acid analysis and identity: Confirmed
 Peptide Content: 93%
 Solubility: DMSO (up to at least 20 mg/ml)
 Physical Description: White solid
 Storage and Stability: Store as supplied desiccated at -20°C for up to 2 years from the date of purchase.
 Solutions in DMSO may be stored at -20°C for up to 3 months. **Protect from light.**

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.