

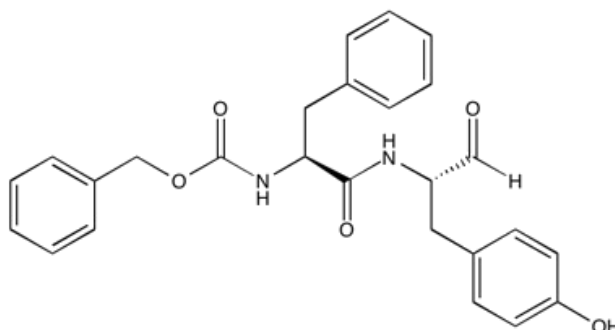
Catalog # 10-3079

Z-Phe-Tyr-CHO

CAS# 167498-29-5

Z-FY-CHO; Z-Phe-Tyr-Aldehyde; SB-412515

Lot # X106291



A potent and selective inhibitor of cathepsin L, $IC_{50}=0.85 \text{ nM}^1$ selective over cathepsin B and calpain II ($IC_{50}s=85.1$ and 184 nM respectively). Suppresses osteoclastic pit formation at 1.5 nM and markedly inhibited parathyroid hormone-stimulated osteoclastic bone resorption.² Also inhibits cathepsin K ($K_is=0.052$ and 1.57 nM for cat L and cat K respectively) and partially provides the basis for the finding that cathepsin K is the protease responsible for osteoclastic bone resorption.³ Provides partial protection against serum and potassium deprivation-induced neuronal death.⁴ Active *in vivo*.²

- 1) Woo *et al.* (1995), *Peptidyl aldehyde derivatives as potent and selective inhibitors of cathepsin L*; Bioorg. Med. Chem. Lett., **5** 1501
- 2) Woo *et al.* (1996), *Suppressive effect of N-(benzyloxycarbonyl)-L-phenylalanyl-L-tyrosinal on bone resorption in vitro and in vivo*; Eur. J. Pharmacol., **300** 131
- 3) James *et al.* (2001) *Potent and selective cathepsin L inhibitors do not inhibit human osteoclast resorption in vitro*; J. Biol. Chem., **276** 11507
- 4) Kaasik *et al.* (2005), *Up regulation of lysosomal cathepsin L and autophagy during neuronal death induced by reduced serum and potassium*; Eur. J. Neurosci., **22** 1023

PHYSICAL DATA

Molecular Weight:	446.50
Molecular Formula:	$C_{26}H_{26}N_2O_5$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 30 mg/ml) or Ethanol (up to 50 mg/ml)
Physical Description:	Off-white or pale yellow solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 1 month.

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