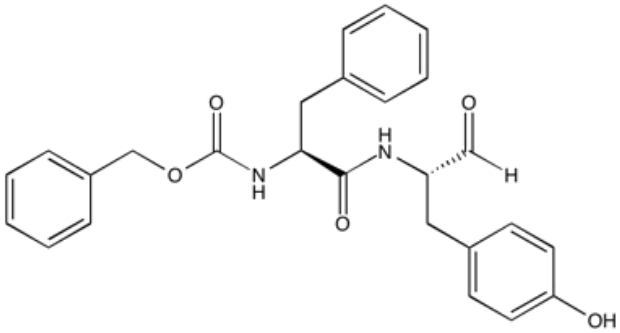
Catalog # 10-3079

Z-Phe-Tyr-CHO

CAS# 167498-29-5

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

Lot # X106290



A potent and selective inhibitor of cathepsin L, IC_{50}=0.85 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 resoption in vitro*; J. Biol. Chem., **276** 11507
4) Kaasik *et al*. (2005), *Up regulation if 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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