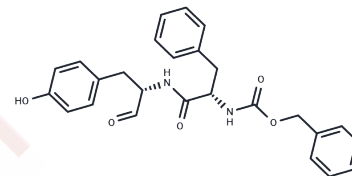


Z-FY-CHO

Chemical Properties

CAS No. :	167498-29-5
Formula:	C ₂₆ H ₂₆ N ₂ O ₅
Molecular Weight:	446.5
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Z-FY-CHO (Z-Phe-Tyr-CHO) is a selective histone L (Cat L) inhibitor that promotes autophagy, reduces the accumulation of P62, and blocks the activation of caspase-3 and PARP.
Targets(IC50)	Cysteine Protease,p62
In vitro	Cell death induced by 6-OHDA was reduced using Z-FY-CHO (10 μM, 1 h pretreatment). Z-FY-CHO inhibited the increase in CTSL protein expression in 6-OHDA-treated SH-SY5Y cells.Z-FY-CHO treatment resulted in an increase in LC3-II expression and a decrease in P62 expression was decreased, indicating enhanced autophagic activity. In addition, Z-FY-CHO blocked the activation of caspase-3 and PARP. [1] The radiosensitization of U251 cells was significantly improved by using the specific cathepsin L inhibitor Z-FY-CHO (10 μM) or transfection with cathepsin L shRNA. Both inhibition and knockdown of cathepsin L in U251 cells enhanced radiation-induced DNA damage and G2/M phase cell cycle arrest. Also, inhibition or knockdown of cathepsin L increased radiation-induced apoptosis as evidenced by elevated Bax levels and decreased Bcl-2 levels. [2]
In vivo	In an ovariectomized mouse model of osteoporosis, intraperitoneal injection of Z-FY-CHO (2.5-10 mg/kg) for 4 weeks was able to dose-dependently reduce bone weight loss.Z-FY-CHO acts as an inhibitor of bone resorption by inhibiting collagen degradation. [3]

Solubility Information

Solubility	DMSO: 80 mg/mL (179.17 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.48 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2396 mL	11.1982 mL	22.3964 mL
5 mM	0.4479 mL	2.2396 mL	4.4793 mL
10 mM	0.224 mL	1.1198 mL	2.2396 mL
50 mM	0.0448 mL	0.224 mL	0.4479 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Li L, et al. Activated cathepsin L is associated with the switch from autophagy to apoptotic death of SH-SY5Y cells exposed to 6-hydroxydopamine. *Biochem Biophys Res Commun*. 2016 Feb 12;470(3):579-585.

Zhang QQ, et al. Cathepsin L suppression increases the radiosensitivity of human glioma U251 cells via G2/M cell cycle arrest and DNA damage. *Acta Pharmacol Sin*. 2015 Sep;36(9):1113-25.

Woo JT, et al. Suppressive effect of N-(benzyloxycarbonyl)-L-phenylalanyl-L-tyrosinal on bone resorption in vitro and in vivo. *Eur J Pharmacol*. 1996 Apr 4;300(1-2):131-5.

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