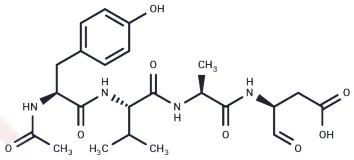
Data Sheet (Cat.No.T19883)

TargetMol

Ac-YVAD-CHO

Chemical Properties



CAS No. : 143313-51-3

Formula: C23H32N4O8

Molecular Weight: 492.52

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Ac-YVAD-CHO (L 709049) is a selective and potent tetrapeptide interleukin 1β-converting enzyme (ICE) and caspase-1 (ICE)-like protease inhibitor with anti-inflammatory activity, inhibits cancer cell growth, and inhibits the production of mature IL-lβ. Ac-YVAD-CHO attenuates quinolinic acid-induced p53 increase and apoptosis in rat striatum.
Targets(IC50)	Apoptosis,Caspase,Interleukin
In vitro	Ac-YVAD-CHO reduced the elevation of IL-1β in LPS-treated plasma and peritoneal fluid. Ac-YVAD-CHO inhibited IL-1β with IC50=2.5 μM (mouse) and IC50=0.7 μM (human) in both mouse and human. [1] 15.6 μM Ac-YVAD-CHO inhibited NO-induced PARP cleavage and reduced NO-induced apoptosis in SNAP-treated thymocytes. [2]
In vivo	30 mg/kg intraperitoneal injection of Ac-YVAD-CHO inhibited IL-1β levels in the blood of P. acnes sensitized mice. [1] Intrastriatal infusion of 2-8 μg Ac-YVAD-CHO attenuated quinolinic acid (QA)-induced apoptosis in rat striatum. [3]

Solubility Information

Solubility	H2O: 50 mg/mL (101.52 mM),Sonication is recommended. DMSO: 2 mg/mL (4.06 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0304 mL	10.1519 mL	20.3037 mL
5 mM	0.4061 mL	2.0304 mL	4.0607 mL
10 mM	0.203 mL	1.0152 mL	2.0304 mL
50 mM	0.0406 mL	0.203 mL	0.4061 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

Fletcher DS, et al. A synthetic inhibitor of interleukin-1 beta converting enzyme prevents endotoxin-induced interleukin-1 beta production in vitro and in vivo. J Interferon Cytokine Res. 1995 Mar;15(3):243-8.
Zhou X, et al. Nitric oxide induces thymocyte apoptosis via a caspase-1-dependent mechanism. J Immunol. 2000 Aug 1;165(3):1252-8.
Cao Y, et al. Caspase-1 inhibitor Ac-YVAD-CHO attenuates quinolinic acid-induced increases in p53 and apoptosis in rat striatum. Acta Pharmacol Sin. 2005 Feb;26(2):150-4.
Boost KA, et al. Targeting caspase-1 by inhalation-therapy: effects of Ac-YVAD-CHO on IL-1 beta, IL-18 and downstream proinflammatory parameters as detected in rat endotoxaemia. Intensive Care Med. 2007 May;33(5): 863-871.