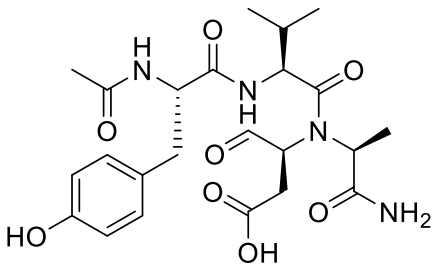
Product data sheet

MedKoo Cat#: 341129 Name: L 709049 CAS: 143313-51-3 Chemical Formula: $C_{23}H_{32}N_4O_8$ Exact Mass: 492.222 Molecular Weight: 492.529	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
L 709049 is a biochemical.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	30.0	60.91
DMSO	30.0	60.91
Ethanol	30.0	60.91
PBS (pH 7.2)	5.0	10.15

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.03 mL	10.15 mL	20.30 mL
5 mM	0.41 mL	2.03 mL	4.06 mL
10 mM	0.20 mL	1.02 mL	2.03 mL
50 mM	0.04 mL	0.20 mL	0.41 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Tamai R, Kiyoura Y. Alendronate augments lipid A-induced IL-1β release and Smad3/NLRP3/ASC-dependent cell death. Life Sci. 2018 Apr 1;198:8-17. doi: 10.1016/j.lfs.2018.02.014. Epub 2018 Feb 10. PMID: 29438662.
2. Cao Y, Gu ZL, Lin F, Han R, Qin ZH. 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. doi: 10.1111/j.1745-7254.2005.00525.x. PMID: 15663890.

In vivo study

1. Boost KA, Hoegl S, Hofstetter C, Flondor M, Stegewerth K, Platacis I, Pfeilschifter J, Muhl H, Zwissler B. 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. doi: 10.1007/s00134-007-0588-0. Epub 2007 Mar 24. PMID: 17384935.

7. Bioactivity
Biological target:

Ac-YVAD-CHO (L-709049) is a potent, reversible, specific tetrapeptide interleukin-lβ converting enzyme (ICE) inhibitor with mouse and human K_i values of 3.0 and 0.76 nM.

Product data sheet

In vitro activity

Pre-treatment with Ac-YVAD-CHO inhibited QA-induced internucleosomal DNA fragmentation. Ac-YVAD-CHO inhibited QA-induced increases in caspase-1 activity and p53 protein levels, but had no effect on QA-induced IkappaB-alpha degradation, NF-kappaB or AP-1 activation.

Reference: Acta Pharmacol Sin. 2005 Feb;26(2):150-4. https://pubmed.ncbi.nlm.nih.gov/15663890/

In vivo activity

These data demonstrate that administration of the caspase-1 inhibitor Ac-YVAD-CHO by inhalation is able to reduce the pulmonary and systemic release of proinflammatory mediators in rat endotoxaemia.

Reference: Intensive Care Med. 2007 May;33(5):863-871. https://pubmed.ncbi.nlm.nih.gov/17384935/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.