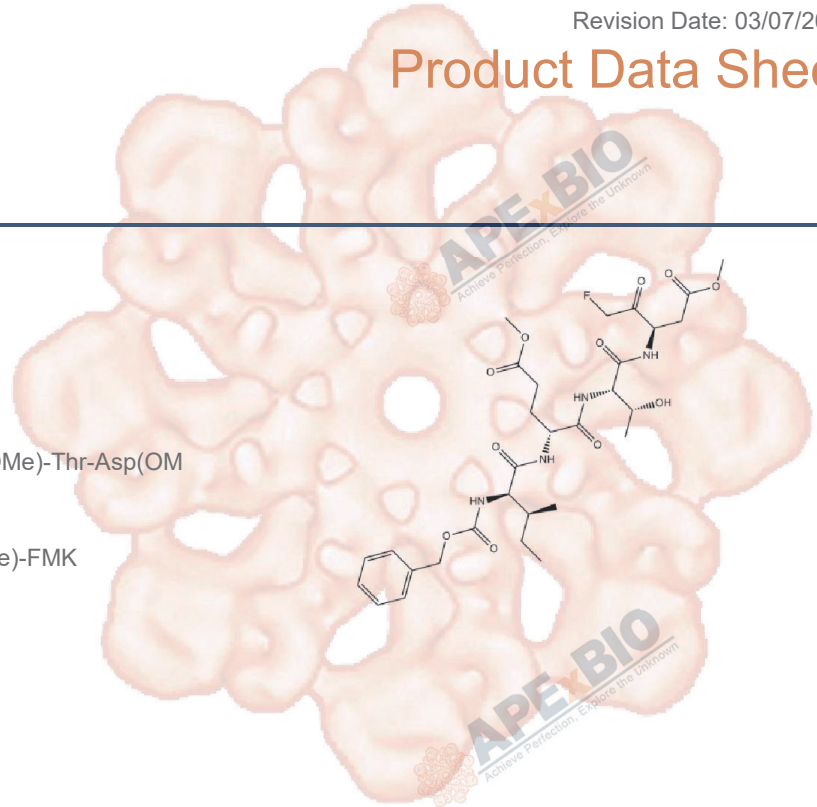


Product Data Sheet

Z-IETD-FMK

Cat. No.:	B3232
CAS No.:	210344-98-2
Formula:	C30H43FN4O11
M.Wt:	654.68
Synonyms:	Benzyloxycarbonyl-Ile-Glu(OMe)-Thr-Asp(OMe)-fluoromethylketone, Z-Ile-Glu(OMe)-Thr-Asp(OMe)-FMK
Target:	Apoptosis
Pathway:	Caspase
Storage:	Store at -20°C



Solvent & Solubility

≥32.73 mg/mL in DMSO; insoluble in EtOH; insoluble in H2O

In Vitro

Preparing Stock Solutions	Mass			
	Solvent	1mg	5mg	10mg
	Concentration			
	1 mM	1.5275 mL	7.6373 mL	15.2746 mL
	5 mM	0.3055 mL	1.5275 mL	3.0549 mL
	10 mM	0.1527 mL	0.7637 mL	1.5275 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

Caspase-8 inhibitor

IC₅₀ & Target

Cell Viability Assay

In Vitro

Cell Line:	Purified CD4+ and CD8+ T cells.
Preparation method:	Limited solubility. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

	Reacting conditions:	24 h
	Applications:	T cell proliferation was assayed using [3H]-thymidine incorporation. z-IETD-FMK (100 µM) inhibits T cell proliferation. About 9% of control activated T cells took up PI after activation and in the presence of 100 µM of z-IETD-FMK cell death increases to 23%. In addition, 100 µM z-IETD-FMK decreases the nuclear translocation of p65 in activated T cells.
In Vivo	Animal experiment	
	Animal models:	SHIP1-/- (CD45.1) mice
	Dosage form:	5 mg/kg three times each week for 3 weeks
	Applications:	There is a significant diminution of anatomical pathology in both the small intestine and lungs of Z-IETD-FMK-treated mice compared with vehicle-administered controls. There is also a prominent recovery of viable CD3+ T-cell numbers in small intestine and lung of the Z-IETD-FMK-treated SHIP1-/- hosts, whereas the vehicle-treated SHIP1-/- hosts exhibit the T-cell paucity.
	Other notes:	Please test the solubility of all compounds in vivo, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Luo Q, Yang D, et al. "Role of the Death Receptor and Endoplasmic Reticulum Stress Signaling Pathways in Polyphyllin I-Regulated Apoptosis of Human Hepatocellular Carcinoma HepG2 Cells." Biomed Res Int. 2018 Dec 25;2018:5241941.PMID:30671458
2. Yazhong Ge, Qing Gao, et al. "Su Yang Decoction induces human colon carcinoma cell apoptosis by activating caspases." Oncology letters.October 26, 2018.
3. Gan I, Jiang J, et al. "Mitochondrial permeability regulates cardiac endothelial cell necroptosis and cardiac allograft rejection." Am J Transplant. 2018 Sep 11.PMID:30203531
4. Rijal D, Ariana A, et al. "Differentiated Macrophages Acquire a Pro-Inflammatory and Cell Death-Resistant Phenotype Due to Increasing XIAP and P38-mediated inhibition of RipK1." J Biol Chem. 2018 Jun 13. pii:jbc.RA118.003614.PMID:29899110
5. Song F, Yu X, et al. "Caspase-3 Inhibition Attenuates the Cytopathic Effects of EV71 Infection. Front Microbiol." 2018 Apr 26;9:817.PMID:29755438

See more customer validations on www.apexbt.com.

References

1. Lawrence CP, Chow SC. Suppression of human T cell proliferation by the caspase inhibitors, z-VAD-FMK and z-IETD-FMK is independent of their caspase inhibition properties. Toxicol Appl Pharmacol. 2012 Nov 15;265(1):103-12.
2. Park MY, Srivastava N, Sudan R et al. Impaired T-cell survival promotes mucosal inflammatory disease in SHIP1-deficient mice. Mucosal Immunol. 2014 Nov;7(6):1429-39.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



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