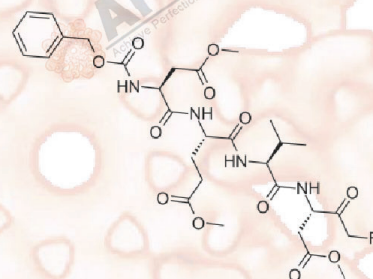


Product Data Sheet

Z-DEVD-FMK

Cat. No.:	A1920
CAS No.:	210344-95-9
Formula:	C ₃₀ H ₄₁ N ₄ O ₁₂ F
M.Wt:	668.66
Synonyms:	Caspase-3 Inhibitor II,Z-Asp(OMe)-Glu(OMe)-Val-Asp(OMe)-FMK
Target:	Apoptosis
Pathway:	Caspase
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; insoluble in EtOH; ≥60 mg/mL in DMSO

In Vitro	Preparing Stock Solutions	Mass			
		Solvent Concentration	1mg	5mg	10mg
		1 mM	1.4955 mL	7.4776 mL	14.9553 mL
		5 mM	0.2991 mL	1.4955 mL	2.9911 mL
		10 mM	0.1496 mL	0.7478 mL	1.4955 mL

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

Biological Activity

Shortsummary	Caspase-3 inhibitor			
IC ₅₀ & Target				
In Vitro	Cell Viability Assay			
	<table border="1"> <tr> <td>Cell Line:</td> <td>WM9, WM35, WM98-1 and WM793 cells</td> </tr> <tr> <td>Preparation method:</td> <td>The solubility of this compound in DMSO is >10 mM. 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.</td> </tr> </table>	Cell Line:	WM9, WM35, WM98-1 and WM793 cells	Preparation method:
Cell Line:	WM9, WM35, WM98-1 and WM793 cells			
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	Reacting conditions:	20 μ M, 24 hours
	Applications:	To demonstrate the importance of caspase activation in TRAIL-induced apoptosis. Z-DEVD-FMK was added to melanoma cells along with TRAIL. Z-DEVD-FMK was only able to partially inhibit the cytotoxic effects of TRAIL. The decreased ability of Z-DEVD-FMK to inhibit death may result from the ability of the peptide to enter the cell.
In Vivo	Animal experiment	
	Animal models:	Male C57Bl/6 mice with controlled cortical impact (CCI) injury
	Dosage form:	Intracerebroventricular injection, 160 ng.
	Applications:	To assess motor recovery, mice were tested for the ability to traverse a narrow, suspended beam during recovery over a 21-day period. Mice treated 1 hour after CCI performed significantly better than did vehicle controls on days 7, 14, and 21 after injury. Mice treated 4 hours after CCI performed significantly better than controls only on day 21 after injury, but this was an isolated observation, as they did not show a trend toward better performance compared with other treatment groups on any other testing day.
	Other notes:	Please test the solubility of all compounds indoor, 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. Lyon de Ana C, Arakcheeva K, et al. "Lack of Ikaros Deregulates Inflammatory Gene Programs in T Cells." J Immunol. 2019 Feb 15;202(4):1112-1123.PMID:30635395
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. Wang Y, Li Y, et al. "The cerebral cavernous malformation disease causing gene KRIT1 participates in intestinal epithelial barrier maintenance and regulation." FASEB J. 2018 Sep 25:fj201800343R.PMID:30252535
- 4.Wang L, Mehta S, et al. "Differential Mechanisms of Septic Human Pulmonary Microvascular Endothelial Cell Barrier Dysfunction Depending on the Presence of Neutrophils." Front Immunol. 2018 Aug 2;9:1743.PMID:30116240
- 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] Griffith T S, Chin W A, Jackson G C, et al. Intracellular regulation of TRAIL-induced apoptosis in human melanoma cells. The Journal of Immunology, 1998, 161(6): 2833-2840.
- [2] Knoblach S M, Alroy D A, Nikolaeva M, et al. Caspase inhibitor z-DEVD-fmk attenuates calpain and necrotic cell death in vitro and after traumatic brain injury. Journal of Cerebral Blood Flow & Metabolism, 2004, 24(10): 1119-1132.

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. Short-term 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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