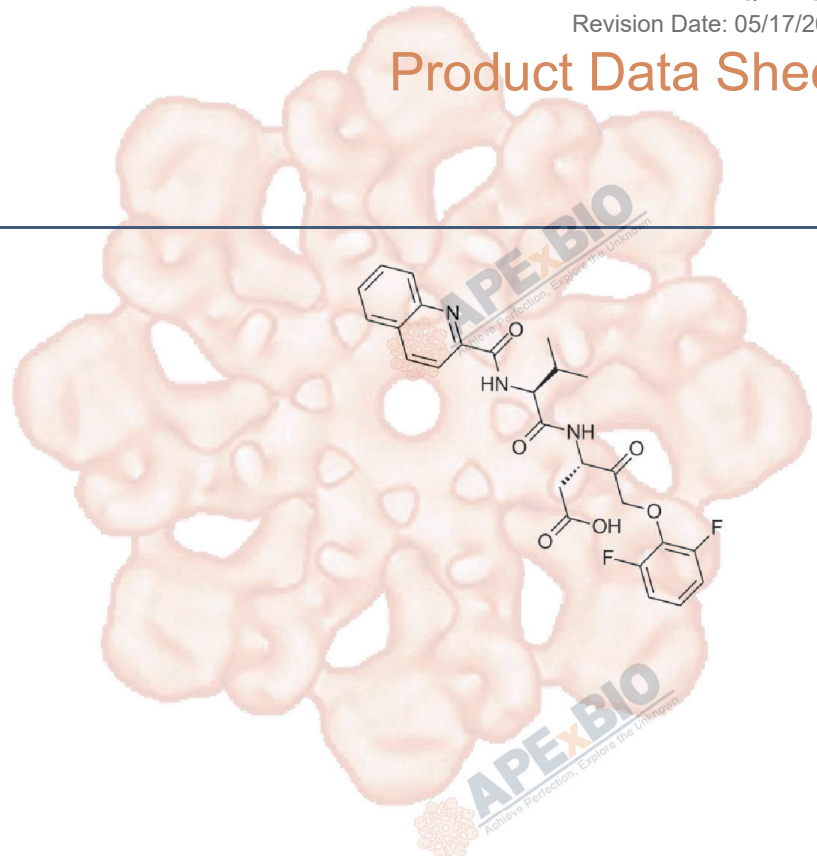


Product Data Sheet

Q-VD-OPh

Cat. No.:	A1901
CAS No.:	1135695-98-5
Formula:	C ₂₆ H ₂₅ F ₂ N ₃ O ₆
M.Wt:	513.49
Synonyms:	
Target:	Apoptosis
Pathway:	Caspase
Storage:	Store at -20°C



Solvent & Solubility

≥ 25.6745mg/mL in DMSO

In Vitro	Preparing Stock Solutions	Mass			
		Solvent Concentration	1mg	5mg	10mg
		1 mM	1.9475 mL	9.7373 mL	19.4746 mL
		5 mM	0.3895 mL	1.9475 mL	3.8949 mL
		10 mM	0.1947 mL	0.9737 mL	1.9475 mL

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

Biological Activity

Shortsummary	Cell-permeable, irreversible pan-caspase inhibitor	
IC ₅₀ & Target	50nM (caspase-1), 25nm (caspase-3), 100nM (caspase-8), 430nM (caspase-9)	
In Vitro	Cell Viability Assay	
	Cell Line:	JURL-MK1 and HL60 cell
	Preparation method:	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.
	Reacting conditions:	No specific suggestion
	Applications:	Q-VD-OPh largely inhibited caspase-3 and 7 activity at 0.05 mM. Caspase-8

was also inhibited by Q-VD-OPh at very low concentration. Q-VD-OPh prevented the cleavage of PARP-1 at 10 mM . Q-VD-OPh inhibited DNA fragmentation and disruption of the cell membrane functionality at 2 mM, and the drug-induced loss of cellular adhesivity to fibronectin need 10 mM Q-VD-OPh.

Animal experiment

Animal models:	TgCRND8 mice in 3 months-old
Dosage form:	Intraperitoneally Injected with 10 mg/kg QVD-OPh at 3 times a week for 3 months
Applications:	Q-VD-OPh inhibited caspase-7 activation and limited the pathological changes of tau and caspase cleavage in chronic treatment of Alzheimer disease.
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.

In Vivo

Product Citations

1. Brokatzky D, D?rflinger B, et al. "A non-death function of the mitochondrial apoptosis apparatus in immunity." EMBO J. 2019 Jun 3;38(11). pii:e100907.PMID:30979778
2. Suresh K, Carino K, et al. "A nonapoptotic endothelial barrier-protective role for caspase-3." Am J Physiol Lung Cell Mol Physiol. 2019 Jun 1;316(6):L1118-L1126.PMID:30908935
3. Vargas JNS, Wang C, et al."Spatiotemporal Control of ULK1 Activation by NDP52 and TBK1 during Selective Autophagy." Mol Cell. 2019 Apr 18;74(2):347-362.e6.PMID:30853401
4. Allocca M, Corrigan JJ, et al. "Inflammation,necrosis, and the kinase RIP3 are key mediators of AAG-dependentalkylation-induced retinal degeneration." Sci Signal. 2019 Feb 12;12(568). pii:eaau9216.PMID:30755477
5. Serrano-Saenz S, Palacios C, et al. "PIM kinases mediate resistance of glioblastoma cells to TRAIL by a p62/SQSTM1-dependent mechanism." Cell Death Dis. 2019 Jan 18;10(2):51.PMID:30718520

See more customer validations on www.apexbt.com.

References

1. Kuželová K1, Grebeňová D, Brodská B.Dose-dependent effects of the caspase inhibitor Q-VD-OPh on different apoptosis-related processes. J Cell Biochem. 2011 Nov;112(11):3334-42.
2. Rohn TT, Kokoulina P, Eaton CR et al. Caspase activation in transgenic mice with Alzheimer-like pathology: results from a pilot study utilizing the caspase inhibitor, Q-VD-OPh. Int J Clin Exp Med. 2009 Nov 5;2(4):300-8.

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 APEX BIO 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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