

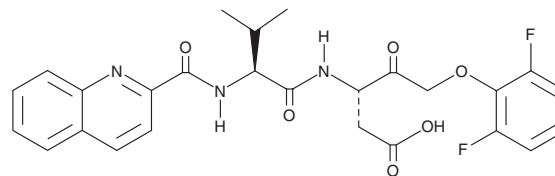
PRODUCT INFORMATION



Q-VD-OPH

Item No. 15260

CAS Registry No.: 1135695-98-5
Formal Name: (3S)-5-(2,6-difluorophenoxy)-3-[[[(2S)-3-methyl-1-oxo-2-[(2-quinolinylcarbonyl)amino]butyl]amino]-4-oxo-pentanoic acid
Synonym: Quinoline-Val-Asp-Difluorophenoxymethyl Ketone
MF: C₂₆H₂₅F₂N₃O₆
FW: 513.5
Purity: ≥95% (mixture of tautomers)
UV/Vis.: λ_{max}: 238, 289 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Q-VD-OPH is supplied as a crystalline solid. A stock solution may be made by dissolving the Q-VD-OPH in the solvent of choice. Q-VD-OPH is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of Q-VD-OPH in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Q-VD-OPH is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Q-VD-OPH should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Q-VD-OPH has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Q-VD-OPH is a broad-spectrum caspase inhibitor, blocking caspases-3, -7, -8, -9, -10, and -12 and inhibiting apoptosis when used at 10 μM.^{1,2} It more effectively inhibits apoptosis and is much less cytotoxic than Z-VAD-FMK (Item No. 14463) and Boc-D-FMK (Item No. 16118).^{1,2} Q-VD-OPH can be used *in vivo*, where it has been shown to prevent ischemia-reperfusion injury-induced apoptosis.^{3,4} This compound, by broadly inhibiting caspases, also promotes the differentiation of leukemic blasts cells, suggesting an application in differentiation therapy of certain forms of cancer.⁵

References

1. Caserta, T.M., Smith, A.N., Gultice, A.D., *et al.* Q-VD-OPH, a broad spectrum caspase inhibitor with potent antiapoptotic properties. *Apoptosis* **8(4)**, 345-352 (2003).
2. Kuzelová, K., Grebenová, D., and Brodská, B. Dose-dependent effects of the caspase inhibitor Q-VD-OPH on different apoptosis-related processes. *J. Cell. Biochem.* **112(11)**, 3334-3342 (2011).
3. Renolleau, S., Fau, S., Goyenvalle, C., *et al.* Specific caspase inhibitor Q-VD-OPH prevents neonatal stroke in P7 rat: A role for gender. *J. Neurochem.* **100(4)**, 1062-1071 (2007).
4. Braun, J.S., Prass, K., Dirnagl, U., *et al.* Protection from brain damage and bacterial infection in murine stroke by the novel caspase-inhibitor Q-VD-OPH. *Exp. Neurol.* **206(2)**, 183-191 (2007).
5. Chen-Deutsch, X., Kutner, A., Harrison, J.S., *et al.* The pan-caspase inhibitor QVD has anti-leukemia effects and can interact with vitamin D analogs to increase HPK1 signaling in AML cells. *Leuk. Res.* **36(7)**, 884-888 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 05/26/2017

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM