Product Datasheet

Z-Val-Ala-Asp (OMe)-FMK Inhibitor
NBP2-29392

Unit Size: 1 mg

Store at -20C. Avoid freeze-thaw cycles.

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Publications: 6

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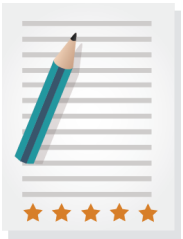

NBP2-29392

Z-Val-Ala-Asp (OMe)-FMK Inhibitor

Product Information	
Unit Size	1 mg
Concentration	Concentration is not relevant for this product. Please see the protocols for proper use of this product.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Buffer	Form: White Solid Make a stock solution of 20 mM in high purity DMSO (>99.9%).

Product Description	
Description	This inhibitor is designed as a methyl ester to facilitate cell permeability. If the intended use is on purified or recombinant enzymes, esterase should be added to generate the free carboxyl groups.
Immunogen	Z-Val-Ala-Asp(OMe)-FMK Z-VAD(OMe)-FMK
Details of Functionality	Mass Spec: M+1=468.2 Chromatography: TLC:EtOAc:80, Hex: 20, Single Spot, Rf:0.3, Single spot>95% H NMR: All functional groups are present HPLC: >90% Peptide content: 81% Formula: C22H30N3O7F Molecular Weight: 467
Notes	This inhibitor is designed as a methyl ester to facilitate cell permeability. If the intended use is on purified or recombinant enzymes, esterase should be added to generate the free carboxyl groups.
Inhibitor Family	Caspase

Publications

Caserta TM, Smith AN, Gultice AD et al. Q-VD-OPh, a broad spectrum caspase inhibitor with potent antiapoptotic properties. Apoptosis. 2003-08-01 [PMID: 12815277] (WB)

Details:
Inhibition of Actinomycin D or TGF beta induced apoptosis in WEHI 231 mouse cells, human Jurkat, or rat HRP-1 (trophoblast) cells: 1. BOC-D-FMK (IMI-2311): Fig 1 (gel analysis of DNA laddering) 2. Z-VAD-FMK (IMI-2310): Fig 1 (gel analysis of DNA laddering) 3. Q-VD-OPH (IMI-2309): Figs 1, 4, 5, 7 (gel analysis of DNA laddering), Figs 2, 3 (TUNEL assay by flow cytometry), Fig 6 (WB analysis of PARP cleavage), Fig 8 (WB analysis of Caspase-3, Caspase-8, and Caspase-9 cleavage) Note: Q-VD-OPH was extensively characterized in this publication and shown to inhibit the major features of apoptosis including caspase activation, DNA laddering, and caspase substrate cleavage.

Xie Q, Lin T, Zhang Y et al. Molecular cloning and characterization of a human AIF-like gene with ability to induce apoptosis. J Biol Chem. 2005-05-20 [PMID: 15764604]

Orlando KA, Pittman RN. Rho kinase regulates phagocytosis, surface expression of GlcNAc, and Golgi fragmentation of apoptotic PC12 cells. Exp Cell Res. 2006-10-15 [PMID: 16904666] (WB)

Details:
Products cited: 1. ROCK-1 (Cleaved), IMG-383A: WB, Figs 1,2 (serum-starved PC12 cells). IMG-383 detected a 30 kDa cleaved Rock-1 band in serum-starved PC12 cells. The addition of the Broad-Spectrum Caspase Inhibitor Z-VAD-FMK (IMI-2310-1, -5) during serum

Orlando KA, Stone NL, Pittman RN. Rho kinase regulates fragmentation and phagocytosis of apoptotic cells. Exp Cell Res. 2006-01-01 [PMID: 16259978]

Details:
Products cited: 1. ROCK-1 (Cleaved), IMG-383A: WB, Fig 3 (tamoxifen-treated Cos7 cells). IMG-383 detected a 30 kDa cleaved Rock-1 band in tamoxifen-treated cells. The addition of the Broad-Spectrum Caspase Inhibitor Z-VAD-FMK (IMI-2310-1, -5) prior to tam

Upadhyay S, Liu C, Chatterjee A et al. LKB1/STK11 suppresses cyclooxygenase-2 induction and cellular invasion through PEA3 in lung cancer. Cancer Res. 2006-08-15 [PMID: 16912160] (Human)

Details:
Products Cited (H1299 human lung cancer cells): 1. Z-VAD-FMK [pan-caspase inhibitor (IMI-2310-1/5], Fig 4C 2. pSuppressorNeo (IMG-800), Fig 7.

Petris G, Casini A, Sasset L et al. CD4 and BST-2/Tetherin Retro-translocate from ER to Cytosol as Partially Folded and Multimeric Molecules. J Biol Chem 2013-11-20 [PMID: 24257748] (Human)

Details:
Tetherin transfected HEk293T cells, Fig 6D. Cells were treated with 100 micromolar ZVAD-FMk; Inhibition of PNGase activity.

Procedures

Product Handling - Assay Method (NBP2-29392)
Product Handling - Assay Method (NBP2-29392):
Materials:
Dissolve 1mg of Z-Val-Ala-Asp(OMe)-FMK in DMSO to get appropriate concentration:
107 ul DMSO = 20mM
214 ul DMSO = 10 mM
428 ul DMSO = 5 mM

Method:
Add 2 ul of above stock solutions to 1 ml of culture medium containing cells to give final DMSO concentration of 0.2%. Levels of DMSO above this may cause some cellular toxicity thus masking the effect of the ICE-protease inhibitors.

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Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Inhibitors are guaranteed for 1 year from date of receipt.

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