


Product datasheet

Z-VAD(OMe)-FMK, Cell permeable, irreversible pan-caspase inhibitor ab120487

[20 References](#) [4 Images](#)

Overview

Product name	Z-VAD(OMe)-FMK, Cell permeable, irreversible pan-caspase inhibitor
Description	Cell permeable, irreversible pan-caspase inhibitor
Biological description	A cell-permeable, irreversible, pan-caspase inhibitor. Inhibits caspase processing and apoptosis induction in tumor cells <i>in vitro</i> . Once in the cell, endogenous esterase activity hydrolyzes the methyl groups to form the biologically active form. Therefore, when using with isolated, purified or recombinant caspase enzymes, pre-treatment with an esterase is required.
CAS Number	187389-52-2
Chemical structure	

Properties

Molecular weight	467.49
Molecular formula	C ₂₂ H ₃₀ N ₃ O ₇
Sequence	VAD (Modifications: N-terminal benzyloxycarbonyl; C-terminal FMK; Asp-3 = Asp(OMe))
PubChem identifier	5497173
Storage instructions	Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview	Soluble in DMSO to 20 mM
Handling	<p>Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one week. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.</p> <p>Need more advice on solubility, usage and handling? Please visit our frequently asked questions (FAQ) page for more details.</p>
SMILES	<chem>FCC(=O)C(CC(=O)OC)NC(=O)[C@H](C)NC(=O)[C@@H](NC(=O)OCc1ccccc1)C(C)C</chem>
Source	Synthetic

Applications

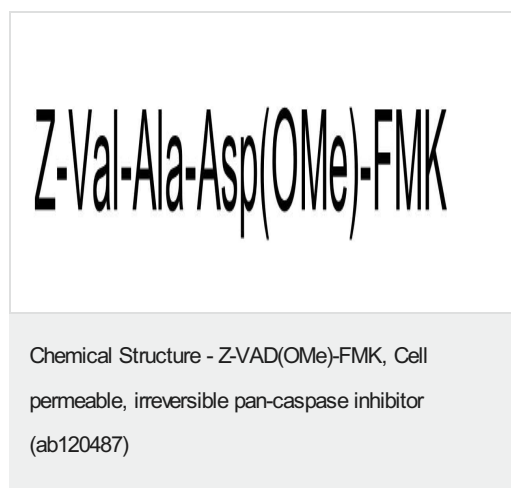
The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab120487 in the following tested applications.

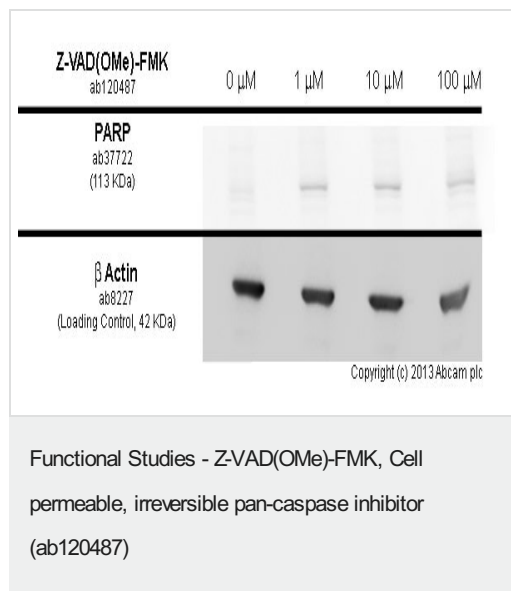
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Functional Studies		Use at an assay dependent concentration.

Images



2D chemical structure image of ab120487, Z-VAD(OMe)-FMK, Cell permeable, irreversible pan-caspase inhibitor

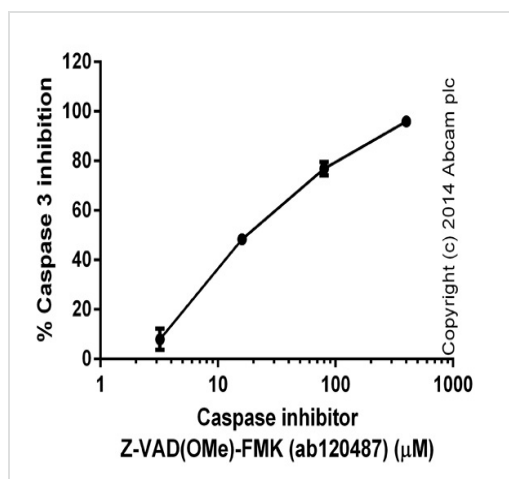


HeLa cells were incubated at 37°C for 1h with vehicle control (0 μ M) and different concentrations of Z-VAD(OMe)-FMK (ab120487).

After this incubation 10 μ M of camptothecin (**ab120115**) was added to all samples and the cells were incubated for further 24h.

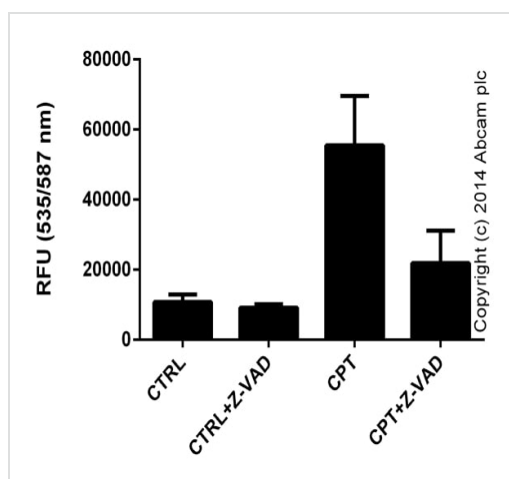
Increased expression of full length PARP (**ab37722**) in camptothecin induced apoptotic HeLA cells correlates with an increase in Z-VAD(OMe)-FMK concentration, as described in literature.

Whole cell lysates were prepared with RIPA buffer (containing protease inhibitors and sodium orthovanadate), 10 μ g of each were loaded on the gel and the WB was run under reducing conditions. After transfer the membrane was blocked for an hour using 5% BSA before being incubated with **ab37722** at 1 μ g /ml and **ab8227** at 1 μ g /ml overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP (**ab97051**) at 1/10000 dilution.



Titration of the Caspase inhibitor Z-VAD(OMe)-FMK (ab120487) (duplicates; +/- SD).

Functional Studies - Z-VAD(OMe)-FMK, Cell permeable, irreversible pan-caspase inhibitor (ab120487)



Functional assays: Caspase 3 (active) Red Staining Kit (ab65617)

Caspase 3 activity in Jurkat cells (3 x10e5 cells) following 24 hour exposure to 2 μM Camptothecin ([ab120115](#)) with or without 50 μM caspase inhibitor Z-VAD(OMe)-FMK (ab120487). Background signal subtracted, duplicates; +/- SD.

Functional Studies - Z-VAD(OMe)-FMK, Cell permeable, irreversible pan-caspase inhibitor (ab120487)

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