

Technical Data Sheet

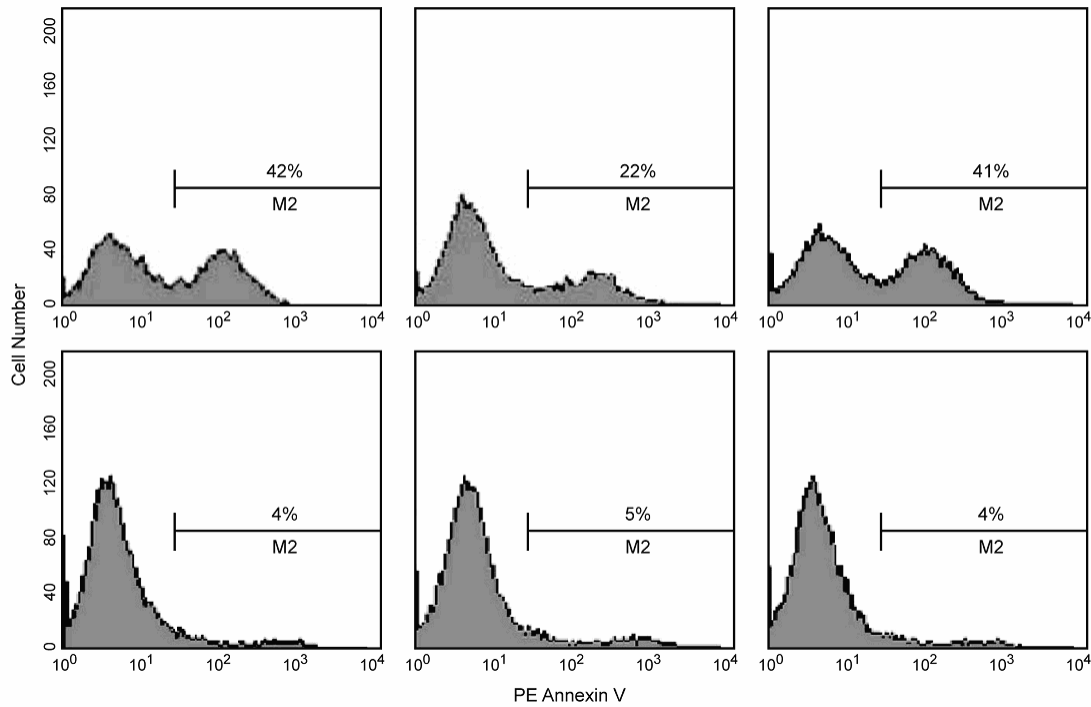
Z-FA-FMK, Negative Control for Caspase Inhibitors

Product Information

Material Number: 550411
Size: 1.0 mg
Storage Buffer: Lyophilized in dimethyl sulfoxide (DMSO).

Description

Members of the caspase family play key roles in inflammation and mammalian apoptosis. Z-FA-FMK is a negative control inhibitor which has no inhibitory effect on apoptosis mediated by caspases and can only inhibit cysteine proteases (those not requiring P1 Asp inhibitors) such as Cathepsin B. Z-FA-FMK has a molecular weight of 386 Daltons.



Flow cytometric analysis of apoptosis in Jurkat cells (Human T-cell leukemia; ATCC TIB-152). Jurkat cells were preincubated with the following: no inhibitor (upper left and bottom left panels), 20 μ M Z-LEHD-FMK (a caspase-9 inhibitor) (upper center and bottom center panels) or 20 μ M Z-FA-FMK negative control inhibitor (upper right and bottom right panels) for 30 minutes, and then either left untreated (bottom row) or treated with 4 μ M camptothecin for 3 hours (top row). Following incubation, cells were collected and stained with PE Annexin V (Cat. No. 559763) to identify cells undergoing apoptosis. The results indicate that in camptothecin treated cells, approximately 42% of the cells were induced to undergo apoptosis and the use of the negative control inhibitor, Z-FA-FMK, showed similar results to the treated cells without inhibitor (right panels), indicating that the negative control inhibitor did not attenuate apoptosis.

Preparation and Storage

Avoid multiple freeze-thaws of product.
Store lyophilized Z-FA-FMK at -20°C. Reconstitute Z-FA-FMK in DMSO before use. Reconstituted Z-FA-FMK may be stored in small aliquots at -20°C.

Application Notes

Application

Flow cytometry	Routinely Tested
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Recommended Assay Procedure:

Z-FA-FMK is designed to be used in both *in vivo* and *in vitro* cell based assays as a negative control in assays used to measure apoptosis. Reconstitute 1.0 mg of Z-FA-FMK in DMSO. A 10 mM stock solution may be made by dissolving 1.0 mg of Z-FA-FMK in 263 μ l DMSO. The final concentration of Z-FA-FMK needed may vary between experimental systems and investigators are encouraged to titrate. As a precautionary

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note, please do not exceed a final DMSO concentration of 0.2% as higher levels may cause cellular toxicity and mask the effects of the caspase inhibitor.

Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
559763	PE Annexin V Apoptosis Detection Kit I	100 tests	(none)
550377	Z-VAD-FMK, General Caspase Inhibitor	1.0 mg	(none)
550378	Z-DEVD-FMK, Caspase-3 Inhibitor	1.0 mg	(none)
550381	Z-LEHD-FMK, Caspase-9 Inhibitor	1.0 mg	(none)
550380	Z-IETD-FMK, Caspase-8 Inhibitor	1.0 mg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Gregoli PA, Bondurant MC. Function of caspases in regulating apoptosis caused by erythropoietin deprivation in erythroid progenitors. *J Cell Physiol.* 1999; 178(2):133-143.(Biology)
Thornberry NA, Lazebnik Y. Caspases: enemies within. *Science.* 1998; 281(5381):1312-1316.(Biology)