

**Unique:**

Other caspase detection assays on the market work through substrate cleavage mechanisms or immunohistochemical principles. APO LOGIX reagents work by active caspase inhibition. Since apoptosis is arrested upon the binding of the reagent to the active caspase heterodimer, the apoptotic cell population does not diminish over time.

Easy to Use:

Add reagent directly to cells. No special buffer or media needed. No preparation of cell lysates required. Simple wash procedure.

Quick:

Incubate for one hour, wash twice, and measure. No time course studies necessary.

Adaptable:

Works in diverse cell lines: human, rodent, Drosophila. Can be performed in conjunction with Annexin staining, TUNEL, antibody staining, or with other APO LOGIX reagents on the same population of cells. Permits high through-put screening. Protocol can be adapted for ex vivo as well as in situ experiments.

Non-Cytotoxic:

Arrests further apoptotic activity via caspase inhibition.

Cell Permeable:

Permits direct visualization of cytosolic apoptotic events.

**Compatible with Multiple
Fluorometric Modalities:**

Fluorescence microscopy.
96-well fluorescence plate reader.
Flow cytometry.

Reliable:

Yields both quantitative and qualitative results.
Gives strong signal with little background noise.

Optimizable:

Cell Technology offers free technical support to help the researcher optimize the application of the APO LOGIX reagents to particular experimental contexts.

Comprehensive:

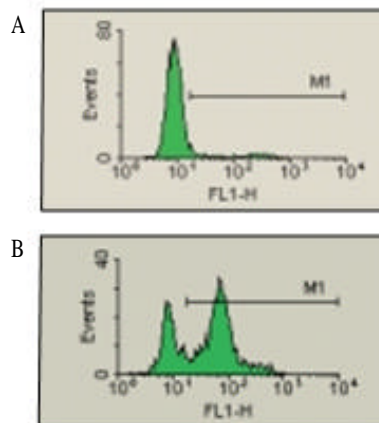
APO LOGIX reagents mark activity across the range of caspase proteins. Our poly-caspase assay is useful for visualizing general caspase activity. We also have caspase-specific assays to target caspases 1, 2, 3, 6, 8, 9, or 10.

APO LOGIX

APO LOGIX Carboxyfluorescein Caspase Detection Kits label active caspases in living cells undergoing apoptosis. Cell Technology's probes utilize carboxyfluorescein(FAM)-labeled peptide fluoromethyl ketone (FMK) caspase inhibitors (FAM-peptide-FMK). These FAM-peptide-FMK compounds are both cell permeable and non-cytotoxic during the course of the assay and thus allow the detection of active caspases in living cell systems.

Assay Principle:

When added to a population of cells undergoing apoptosis, the FAM-peptide-FMK probe enters each cell and covalently binds to the reactive cysteine residue on the large subunit of the caspase heterodimer. By this process the probe is sequestered and accumulates inside the cell. At the same time the probe inhibits further caspase activity. The remaining unbound reagent is easily washed away. Cells bound to the FAM-peptide-FMK can be detected by a flow cytometer, a fluorescent microscope, or a 96-well fluorescence plate reader. FAM-peptide-FMK excites at 488 nm and has a maximum emission range of 520-535 nm.



Jurkat cells treated with DMSO (A) or camptothecin (B). Cells were labeled with FAM-VAD-FMK for 1 hour. Caspase activity was detected using flow cytometry.

For research purposes only. Not for diagnostic or therapeutic use.



References:

1. Smolewski P; Grabarek J; Phelps DJ; Darzynkiewicz Z. Stathmo-Apoptosis: Arresting Apoptosis by Fluorochrome-Labeled Inhibitor of Caspases. *International Journal of Oncology* 2001: 19:657-663
 2. Amstad PA; Johnson GL; Lee BW; Dhawan S. CaspaTag™ FAM-VAD-FMK: A Novel In Situ Marker for the Detection of Activated Caspases. *American Biotechnology Laboratory* 2000: 18 (10): 52-54.
 3. Phelps DJ; Cell Death Makes For Life Giver. *Helix* 2000 June: 12
 4. Bedner E; Smolewski P; Amstad PA; Darzynkiewicz Z. Activation of Caspases Measured In Situ by Binding of Fluorochrome-Labeled Inhibitors of Caspases (FLICA): Correlation with DNA Fragmentation. *Experimental Cell Research*. 2000: 259:308-313.
 5. Smolewski P; Bedner E; Du L; Hsieh T-C; Wu JM; Phelps DJ; Darzynkiewicz Z. Detection of Caspases Activation by Fluorochrome-Labeled Inhibitors: Multiparameter Analysis by Laser Scanning Cytometry. *Cytometry* 2001: 44:73-82.
 6. Phelps DJ; Amstad PA; Johnson GL; Lee BW. New Fluorescent Tools for Apoptosis. *Luminescence Forum*. 2001: Vol 7, No. 1, pgs 4, 12.
 7. Amstad PA; Yu G; Johnson GL; Lee BW; Dhawan S; Phelps DJ. Detection of Caspase Activation In Situ by Fluorochrome-Labeled Caspase Inhibitors. *BioTechniques* 2001: 31:608-616.
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Ordering Information

Product Description	Catalog #	Size	Price
FAM-VAD-FMK Poly caspase detection kit	FAM100-1	25 Tests	\$145
FAM-VAD-FMK Poly caspase detection kit	FAM100-2	100 Tests	\$425
FAM-DEVD-FMK Caspase 3 detection kit	FAM200-1	25 Tests	\$145
FAM-DEVD-FMK Caspase 3 detection kit	FAM200-2	100 Tests	\$425
FAM-LETD-FMK Caspase 8 Detection Kit	FAM300-1	25 Tests	\$155
FAM-LETD-FMK Caspase 8 Detection Kit	FAM300-2	100 Tests	\$445
FAM-LEHD-FMK Caspase 9 Detection Kit	FAM400-1	25 Tests	\$145
FAM-LEHD-FMK Caspase 9 Detection Kit	FAM400-2	100 Tests	\$425
FAM-VEID-FMK Caspase 6 Detection Kit	FAM500-1	25 Tests	\$195
FAM-VEID-FMK Caspase 6 Detection Kit	FAM500-2	100 Tests	\$495
FAM-YVAD-FMK Caspase 1 Detection Kit	FAM600-1	25 Tests	\$155
FAM-YVAD-FMK Caspase 1 Detection Kit	FAM600-2	100 Tests	\$445
FAM-VDVAD-FMK Caspase 2 Detection Kit	FAM700-1	25 Tests	\$195
FAM-VDVAD-FMK Caspase 2 Detection Kit	FAM700-2	100 Tests	\$495
FAM-AEVD-FMK Caspase 10 Detection Kit	FAM800-1	25 Tests	\$195
FAM-AEVD-FMK Caspase 10 Detection Kit	FAM800-2	100 Tests	\$495

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