

APOPTEST™-FITC | Quantitation of Apoptosis



The phospholipid-binding properties of annexin V utilized in Dako's simple and quick protocol **allows for the flow cytometric measurement of apoptosis**



Apoptosis

During apoptosis, cells expose phosphatidylserine at the cell surface. Annexin V is a phospholipid-binding protein, which in the presence of calcium ions binds selectively and with high affinity to phosphatidylserine. It displays very low affinity for phospholipid species such as phosphatidylethanolamine, sphingomyelin and phosphatidylcholine.

This binding profile makes annexin V a powerful and selective tool for the detection of apoptotic cells. In several papers, the successful use of annexin V for the measurement of apoptosis of various cell types by flow cytometry has been described (1-3).

APOPTEST™-FITC*

APOPTEST™-FITC has been designed to measure apoptosis in a variety of suspended cell types by flow cytometry. The kit contains fluorescein-conjugated annexin V, propidium iodide and binding buffer. Cells suspended in binding buffer are mixed with the fluorescein-conjugated annexin V and propidium iodide. After incubation for 10 minutes, cells are ready for analysis.

The combination of annexin V/FITC and propidium iodide makes it possible to discriminate three distinct phenotypes: the non-apoptotic live cells that are unlabeled, the apoptotic cells that are labeled by annexin V/FITC, and the necrotic cells that are labeled by both annexin V/FITC and propidium iodide. The APOPTEST™-FITC kit includes fluorescein-conjugated annexin V and the dye, propidium iodide,

References

1. Koopman G, Reutelingsperger CP, Kuijten GA, Keehnen RM, Pals ST, van Oers MH. Annexin V for flow cytometric detection of phosphatidylserine expression on B cells undergoing apoptosis. *Blood* 1994;84:1415-20.
2. Vermes I, Haanen C, Steffens-Nakken H, Reutelingsperger CP. A novel assay for apoptosis. Flow cytometric detection of phosphatidylserine expression on early apoptotic cells using fluorescein labeled annexin V. *J Immunol Methods* 1995;184:39-51.
3. Van Engeland M, Ramaekers FC, Schutte B, Reutelingsperger CP. A novel assay to measure loss of plasma membrane asymmetry during apoptosis of adherent cells in culture. *Cytometry* 1996;24:131-9.

ORDERING INFORMATION

Product	Size	Code
APOPTEST™-FITC	100 tests	K2350

For Research Use Only

* Trade name of NEXINS Research, The Netherlands. European Patent 755,516 and U.S. Patent 5,834,196



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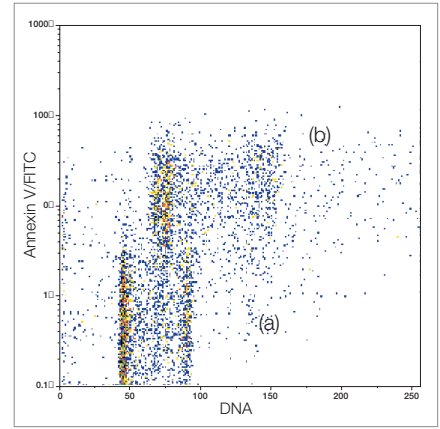


Figure 1 A mixture of two cell lines stained with annexin V/FITC and DAPI are analyzed: Cell line 1 (a), which cannot be induced to undergo apoptosis, and cell line 2 (b), which is inducible. As shown, cell line 1 does not show an annexin V/FITC staining whereas cell line 2 is nicely positive.

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