Annexin V-FITC Apoptosis Kit

Cat. No. KITZ-061 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	The Annexin V-FITC Apoptosis Detection kit detects apoptotic cells by flow cytometry. The annexins are a group of homologous proteins which bind phospholipids in the presence of calcium. Annexin V-FITC is a fluorescent probe which binds to phosphatidylserine in the presence of calcium. Apoptosis, or programmed cell death, is a mechanism of cells used to negatively select cells that are deleterious to the host. The cellular changes involved in the process include loss of phospholipid asymmetry during the early stages of apoptosis. In living cells, phosphatidylserine is transported to the inside of the lipid bilayer by the Mg-ATP dependent enzyme, aminophospholipid translocase. At the onset of apoptosis, phosphatidyl-serine, which is normally found on the internal part of the plasma membrane, becomes translocated to the external portion of the membrane. The phosphatidyl-serine becomes available to bind to the annexin V-FITC conjugate in the presence of calcium. The procedure consists of the binding of annexin V-FITC to phosphatidylserine in the membrane of cells, which are beginning the apoptotic process, and the binding of propidium iodide to the cellular DNA in cells where the cell membrane has been totally compromised. Apoptosis may be either spontaneous or induced by incubating the cells with staurosporine. The cells are incubated with annexin V-FITC and propidium iodide. After a 10-minute incubation period at room temperature the cells are analyzed by flow cytometry. Annexin V-FITC is detected as a green fluorescence and propidium iodide is detected as a red fluorescence.
Size	20 tests
Storage	The kit ships on wet ice and storage at 2–8 °C is recommended.

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Shipping	Ice pack
Kit Components	Annexin V-FITC Conjugate:50 µg/mL in 50 mM Tris-HCl, pH 7.5, containing 100 mM NaCl Propidium Iodide Solution: 100 µg/mL in 10 mM potassium phosphate buffer, pH 7.4, containing 150 mM NaCl 10 Binding Buffer: 100 mM HEPES/NaOH, pH 7.5 containing 1.4 M NaCl and 25 mM CaCl2
Materials Required but Not Supplied	Staurosporine, DMSO Dulbecco"s phosphate buffered saline (DPBS), 0.2 µm filtered 12 75 mm test tubes Cells to undergo apoptosis Serological centrifuge Incubator at 37 °C, 5% CO2 Flow cytometer

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