FITC Annexin V Apoptosis Detection Kit with PI

Catalog# / Size
640914 / 100 tests

Other Names
Annexin A5 Apoptosis Detection Kit

Description
BioLegend's FITC Annexin V Apoptosis Detection Kit with PI has been specifically designed for the identification of apoptotic and necrotic cells.

Annexin V (or Annexin A5) is a member of the annexin family of intracellular proteins that binds to phosphatidylserine (PS) in a calcium-dependent manner. PS is normally only found on the intracellular leaflet of the plasma membrane in healthy cells, but during early apoptosis, membrane asymmetry is lost and PS translocates to the external leaflet. Fluorochrome-labeled Annexin V can then be used to specifically target and identify apoptotic cells. Annexin V Binding Buffer is recommended for use with Annexin V staining. Annexin V binding alone cannot differentiate between apoptotic and necrotic cells. To help distinguish between the necrotic and apoptotic cells we recommend use of our Propidium Iodide Solution (PI). Early apoptotic cells will exclude PI, while late stage apoptotic cells and necrotic cells will stain positively, due to the passage of these dyes into the nucleus where they bind to DNA.

Propidium iodide is a fluorescent dye that binds to DNA. When excited by 488 nm laser light, it can be detected with in the PE/Texas Red® channel with a bandpass filter 610/10. It is commonly used in evaluation of cell viability or DNA content in cell cycle analysis by flow cytometry.

Product Details

Reactivity
All mammalian species

Concentration
Lot-specific (please contact technical support for concentration and total µg amount, or use our Lookup tool if you have a lot number.)

Storage & Handling
Store between 2°C and 8°C. Do not freeze.

Caution: Propidium Iodide Solution is toxigenic and mutagenic; handle with care.

Application
FC - Quality tested

Recommended Usage
Staining Procedure:
1. Wash cells twice with cold BioLegend's Cell Staining Buffer, and then resuspend cells in Annexin V Binding Buffer at a concentration of 0.25-1.0 x 10⁷ cells/ml.
2. Transfer 100 µl of cell suspension in a 5 ml test tube.
3. Add 5 µl of FITC Annexin V.
4. Add 10 µl of Propidium Iodide Solution.
5. Gently vortex the cells and incubate for 15 min at room temperature (25°C) in the dark.
6. Add 400 µl of Annexin V Binding Buffer to each tube. Analyze by flow cytometry with proper machine settings.

Application Notes
Materials Provided:
0.5 ml of FITC Annexin V
1 ml of Propidium Iodide Solution
50 ml of Annexin V Binding Buffer

Application Not Included:
Cell Staining Buffer (Cat. No. 420201)

Application References
(PubMed link indicates BioLegend citation)

Product Citations
Antigen Details

<table>
<thead>
<tr>
<th>Biology Area</th>
<th>Apoptosis/Tumor Suppressors/Cell Death, Cell Biology, Neuroscience</th>
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<td>Gene ID</td>
<td>308</td>
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Product Data

Human T leukemia cell line Jurkat, treated (left) or non-treated (right) with BioLegend’s anti-human CD95 (EOS9.1) mAb (Cat. No. 305704) for 4 hours at 37°C, then stained with Annexin V-FITC for 15 minutes at 37°C in Annexin V Binding buffer. Propidium Iodide (PI) (cat. 421301 at 0.03 µg/Test) was added 5 minutes prior to running tubes.