

# APC Annexin V

<b>Catalog# / Size</b>	640919 / 25 tests 640920 / 100 tests 640941 / 300 tests
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Annexin A5

<b>Description</b>	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 (Cat. No. 422201) is recommended for use with Annexin V staining. Annexin V binding alone cannot differentiate between apoptotic cells and necrotic. Therefore, we recommend using our Helix NP™ Blue (Cat No. 425305), Helix NP™ Green (Cat No. 425303) or Helix NP™ NIR (Cat. No. 425301). Early apoptotic cells will exclude 7-AAD and 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.
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## Product Details

<b>Verified Reactivity</b>	All mammalian species
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The purified protein was conjugated with APC under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our <a href="#">Certificate of Analysis</a> online tool.)
<b>Storage &amp; Handling</b>	The Annexin V solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this product is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per 100,000 - million cells in a 100 µl volume of Annexin V Binding Buffer (Cat No. 422201). It is recommended that the reagent be titrated for optimal performance for each application.
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	<p><b>Annexin V Staining</b></p> <ol style="list-style-type: none"> <li>1. Wash cells twice with cold BioLegend Cell Staining Buffer (Cat. No. 420201) and then resuspend cells in Annexin V Binding Buffer (Cat. No. 422201) at a concentration of <math>1 \times 10^6</math> cells/ml.</li> <li>2. Transfer 100 µl of cell suspension in 5 ml test tube.</li> <li>3. Add 5 µl of APC Annexin V.</li> <li>4. Add 10 µl of PI solution (Cat. No. 421301) or 7-AAD (Cat. No. 420403/420404).</li> <li>5. Gently vortex the cells, and incubate for 15 min at room temperature (25°C), in the dark.</li> <li>6. Add 400 µl of Annexin V Binding Buffer (Cat. No. 422201) to each tube. Analyze by flow cytometry.</li> </ol> <p><b>For a better experience detecting apoptosis, we now recommend <a href="#">Apotracker™</a>. Cell staining with Apotracker™ is Calcium independent. Thus, no special buffers are required, and the protocol can be shortened for single-step co-staining with other reagents</b></p>

<b>Application References</b>	<ol style="list-style-type: none"> <li>1. Koopman G, et al. 1994. <i>Blood</i> 84:1415.</li> <li>2. Vermes I, et al. 1995. <i>J. Immunol. Methods</i> 184:39.</li> <li>3. Dachary-Prigent J, et al. 1993. <i>Blood</i> 81:2554.</li> <li>4. Sekine C, et al. 2009. <i>Int Immunol.</i> <a href="#">PubMed</a></li> <li>5. Grujic M, et al. 2010. <i>J. Immunol.</i> 185:1730. <a href="#">PubMed</a></li> <li>6. Hussain MS, et al. 2013. <i>Hum Mol Genet.</i> 22:5199. <a href="#">PubMed</a></li> <li>7. Feng Q, et al. 2014. <i>PLoS One.</i> 9:95927. <a href="#">PubMed</a></li> <li>8. Isobe T, et al. 2014. <i>eLife.</i> 3:1977. <a href="#">PubMed</a></li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

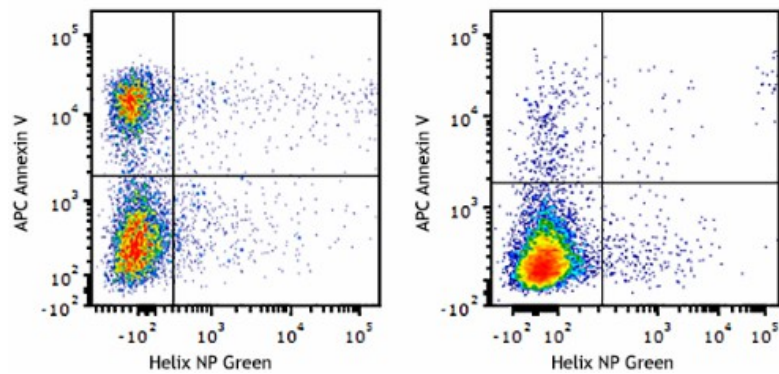
<b>Product Citations</b>	<ol style="list-style-type: none"> <li>1. Tang Z, et al. 2017. <i>Cell Death Differ.</i> 24:2127. <a href="#">PubMed</a></li> <li>2. Patel RP, et al. 2020. <i>Transl Oncol.</i> 14:100917. <a href="#">PubMed</a></li> <li>3. Preda MB, et al. 2021. <i>Cell Death Dis.</i> 12:566. <a href="#">PubMed</a></li> <li>4. Chugh RM, et al. 2021. <i>Stem Cell Res Ther.</i> 12:388. <a href="#">PubMed</a></li> <li>5. Inclan-Rico JM, et al. 2020. <i>Nat Immunol.</i> 21:1181. <a href="#">PubMed</a></li> <li>6. McCartin C, et al. 2022. <i>Cancers (Basel).</i> 14:. <a href="#">PubMed</a></li> <li>7. Isobe T, et al. 2014. <i>Elife.</i> 3:1977. <a href="#">PubMed</a></li> <li>8. Wu N, et al. 2020. <i>Cell Rep.</i> 30:1129. <a href="#">PubMed</a></li> <li>9. Wiley CD, et al. 2019. <i>Cell Rep.</i> 28:3329. <a href="#">PubMed</a></li> <li>10. Kuljanin M, et al. 2018. <i>Cell Rep.</i> 25:2524. <a href="#">PubMed</a></li> </ol>
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**RRID** not an antibody (BioLegend Cat. No. 640919)  
AB\_2561515 (BioLegend Cat. No. 640920)  
AB\_2616657 (BioLegend Cat. No. 640941)

Antigen Details

**Biology Area** Apoptosis/Tumor Suppressors/Cell Death, Cell Biology, Neuroscience  
**Gene ID** [308](#)

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, then stained with Annexin V- APC and Helix NP Green (Cat. No. 425303 at 5 nM) in Annexin V Binding buffer for 15 minutes at 25°C.

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