

Annexin V Recombinant Protein, Biotin, eBioscience™

Product Details

Size	20 Tests
Species	All, Human, Mouse, Rat
Expression system	E. coli
Class	Recombinant
Type	Protein
Purity	>89% by SDS-PAGE and RP-HPLC
Conjugate	Biotin
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	TBS, pH 7.4, with 1% BSA
Contains	0.02% sodium azide
Storage conditions	4° C, do not freeze

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	Assay-Dependent	-
Control (Ctrl)	Assay-Dependent	-

Product Specific Information

Description: Annexins are a family of calcium-dependent phospholipid-binding proteins, which bind to phosphatidylserine (PS) to identify apoptotic cells. In healthy cells, PS is predominantly located along the cytosolic side of the plasma membrane. Upon initiation of apoptosis, PS loses its asymmetric distribution in the phospholipid bilayer and translocates to the extracellular membrane, which is detectable with fluorescently labeled Annexin V. In early stages of apoptosis, the plasma membrane excludes viability dyes such as propidium iodide (PI) and 7-AAD, therefore cells which display only Annexin V staining (PI/7-AAD negative) are in early stages of apoptosis. During late-stage apoptosis, loss of cell membrane integrity allows Annexin V binding to cytosolic PS, as well as cell uptake of PI and 7-AAD. Annexin V staining, paired with 7-AAD or PI is widely used to identify apoptotic stages by flow cytometry.

Annexin V has also been identified as an anticoagulant protein in the blood coagulation cascade, by acting as an inhibitor of prothrombin activation. The presence of antibodies to Annexin V is associated with systemic lupus erythematosus (SLE), recurrent spontaneous abortions and systemic sclerosis (SSc).

Purity: Annexin V is >89% pure as demonstrated by SDS-gel electrophoresis and reverse phase HPLC.

Biotin labelling allows simple direct detection of PS by FACS analysis using fluorescence-labeled Streptavidin. Counterstaining by propidium iodide allows the discrimination of apoptotic cells.

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