

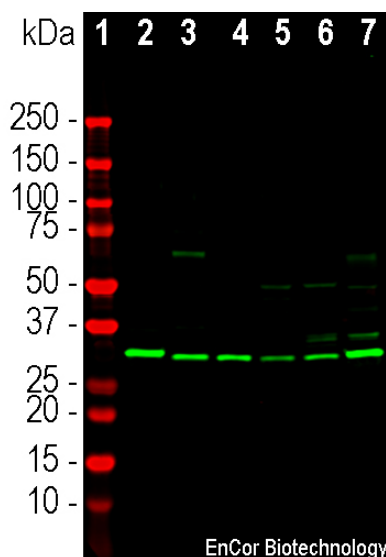
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**HGNC Name:** ANXA5  
**UniProt:** P08758  
**RRID:** AB\_2861176  
**Immunogen:** Full length human recombinant annexin A5 expressed in and purified from *E. coli*.  
**Format:** Affinity purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM NaN<sub>3</sub>  
**Storage:** Store at 4°C for short term, for longer term store at -20°C  
**Recommended dilutions:**  
 WB: 1:10,000-20,000. IF/ICC 1:2,000-5,000, IHC: 1:5,000

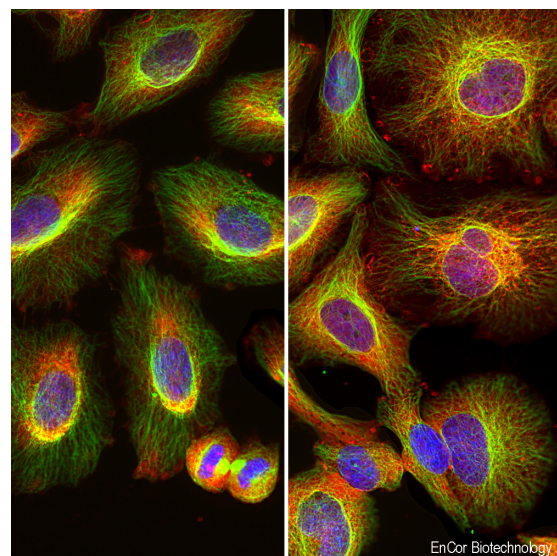
### References:

- Gerke V, and Moss SE. Annexins: from structure to function. *Physiol Revs* 82:331-71 (2002).
- Barton GJ, et al. Amino acid sequence analysis of the annexin super-gene family of proteins. *Eur J Biochem* 198:749-60 (1991).
- Geisow MJ, et al. A consensus amino-acid sequence repeat in *Torpedo* and mammalian Ca<sup>2+</sup>-dependent membrane-binding proteins. *Nature* 320:636-8 (1986).
- Koopman G, et al. Annexin V for Flow Cytometric Detection of Phosphatidylserine Expression on B Cells Undergoing Apoptosis. *Blood* 84:1415-1420 (1984).

Applications	Host	Isotype	Molecular Wt.	Species Cross-Reactivity
WB, IF/ICC, IHC	Rabbit		35kDa	Hu, Rt, Ms, Do, Ho



Western blot analysis of different cell lines lysates using rabbit pAb to annexin A5, RPCA-ANXA5, dilution 1:10,000 in green: [1] protein standard (red), [2] mouse NIH-3T3, [3] rat C6, [4] human HeLa, [5] human HEK293, [6] canine A72, and [7] equine NBL6. Strong band at about 35kDa corresponds to annexin A5 protein, detected in all cell preparations.



Immunofluorescent analysis of HeLa cells stained with rabbit pAb to annexin A5, RPCA-ANXA5, dilution 1:3,000 in red, and costained with mouse mAb to  $\beta$ -tubulin, MCA-4E4, dilution 1:5,000 in green. The blue is Hoechst staining of nuclear DNA. Left: HeLa cells grown under normal conditions. Right: HeLa cells treated with 15mM Pentoxifyline for 24 hours. Annexin A5 is membrane associated and concentrated in blebs, and Pentoxifyline activates apoptosis and upregulates Annexin A5 expression.

The annexins are a large family of related proteins which share the property of binding to phospholipid containing membranes in a Calcium dependent manner (1). Different members of the family were discovered by different laboratories and as a result the various members have many alternate names, such as lipocortin, calpactin, calelectrin and others. In fact Annexin A5 has a particularly surprising number of alternate names, 20 being listed on the [Genecards ANXA5](http://Genecards.org) site. The widely used current nomenclature is now based on a letter to indicate membership in a particular one of several annexin sub-families and a number for individual gene products, hence the name annexin A5. The annexin family is defined by a compact disc structure formed from 16 closely packed  $\alpha$ -helices which coordinate multiple calcium ions with phospholipid containing membranes. This domain is defined by 4 imperfect repeats of a ~77 amino acid sequence, each repeat forming 4  $\alpha$ -helices (2,3). Annexin A5 is expressed widely in tissues and has been used as a marker of apoptosis, as apoptotic cells may express binding sites for this protein on their cell surface. The protein binds to phosphatidylserine, a membrane lipid normally not found on the external surface of cells which becomes expressed on the cell surface during apoptosis. As a result fluorescent annexin A5 or annexin A5 antibody can be used to isolate apoptotic cells by fluorescence activated cell sorting (4).

The RPCA-ANXA5 antibody was made against full length recombinant human annexin A5 expressed in and purified from *E. coli*. The antibody recognizes annexin A5 in human, rodents and many other mammals by western blotting IF, ICC and IHC. We also market a mouse monoclonal antibody to annexin A5 which has a more restricted cross-species reactivity, binding annexin A5 in human and monkey, but not other mammalian species MCA-6A12.

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### Abbreviation Key:

**mAb—Monoclonal Antibody pAb—Polyclonal Antibody WB—Western Blot IF—Immunofluorescence ICC—Immunocytochemistry IHC—Immunohistochemistry E—ELISA Hu—Human Mo—Monkey Do—Dog Rt—Rat Ms—Mouse Co—Cow Pi—Pig Ho—Horse Ch—Chicken Dr—D. rerio Dm—D. melanogaster Sm—S. mutans Ce—C. elegans Sc—S. cerevisiae Sa—S. aureus Ec—E. coli.**