

Annexin V (C-20): sc-1928

BACKGROUND

The Annexin family of calcium-binding proteins is composed of at least ten mammalian genes. It is characterized by a conserved core domain which binds to phospholipids in a Ca^{2+} -dependent manner and a unique amino terminal region which may confer binding specificity. Annexin family members have been implicated as regulators of such diverse processes as ion flux, endocytosis and exocytosis, and cellular adhesion. For example, the crystal structure of Annexin III has suggested a hydrophilic amino terminus with possible Ca^{2+} channel activity. Similarly, Annexin V has ion channel properties. Annexin IV, also referred to as endonexin, functions to regulate Cl^- flux by mediating calmodulin kinase II (CaMKII) activity and Annexin V has been shown to regulate PKC activity. Annexin V is ubiquitously expressed at high levels in tissues and cells grown in tissue culture, while Annexin VIII. Annexin VIII is often expressed at a 100-fold lower level than Annexin V. However, Annexin VIII is preferentially expressed in acute promyelocytic leukemia (APL) cells which may relate to its role in hematopoietic cell differentiation.

REFERENCES

1. Smith, P.D., et al. 1994. Structural evolution of the annexin supergene family. *Trends Gen.* 10: 241-246.
2. Chan, H.C., et al. 1994. Annexin IV inhibits calmodulin-dependent protein kinase II-activated chloride conductance. A novel mechanism for ion channel regulation. *J. Biol. Chem.* 269: 32464-32468.
3. Reutelingsperger, C.P., et al. 1994. Differential tissue expression of Annexin VIII in human. *FEBS Lett.* 349: 120-124.
4. Liu, J.H., et al. 1994. Expression of the Annexin VIII gene in acute promyelocytic leukemia. *Leuk. Lymphoma* 13: 381-386.

CHROMOSOMAL LOCATION

Genetic locus: ANXA5 (human) mapping to 4q27; Anxa5 (mouse) mapping to 3 B.

SOURCE

Annexin V (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping C-terminus (h) of Annexin V of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1928 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Annexin V (C-20) is recommended for detection of Annexin V of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

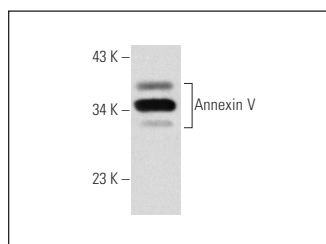
Annexin V (C-20) is also recommended for detection of Annexin V in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Annexin V siRNA (h): sc-29686, Annexin V siRNA (m): sc-29687, Annexin V shRNA Plasmid (h): sc-29686-SH, Annexin V shRNA Plasmid (m): sc-29687-SH, Annexin V shRNA (h) Lentiviral Particles: sc-29686-V and Annexin V shRNA (m) Lentiviral Particles: sc-29687-V.

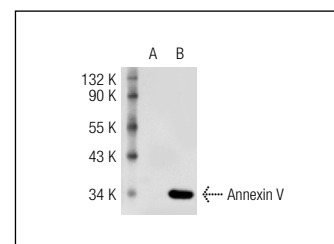
Molecular Weight of Annexin V: 36 kDa.

Positive Controls: Annexin V (m): 293T Lysate: sc-118434, Caki-1 cell lysate: sc-2224 or JAR cell lysate: sc-2276.

DATA



Annexin V (C-20): sc-1928. Western blot analysis of Annexin V expression in Caki-1 whole cell lysate.



Annexin V (C-20): sc-1928. Western blot analysis of Annexin V expression in non-transfected: sc-117752 (A) and mouse Annexin V transfected: sc-118434 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Riva, C., et al. 2001. Bcl-2/Bax protein expression in heart, slow-twitch and fast-twitch muscles in young rats growing under chronic hypoxia conditions. *Mol. Cell. Biochem.* 226: 9-16.
2. Doherty, A.S., et al. 2002. Regulation of stage-specific nuclear translocation of Dnmt1o during preimplantation mouse development. *Dev. Biol.* 242: 255-266.
3. Rossi, G., et al. 2004. *Helicobacter pylori* infection negatively influences pregnancy outcome in a mouse model. *Helicobacter* 9: 152-157.
4. Leon, C., et al. 2006. Annexin V associates with the IFN- γ receptor and regulates IFN- γ signaling. *J. Immunol.* 176: 5934-5942.
5. Leon, C., et al. 2008. Modifications in low-density lipoprotein receptor expression affects Cyclosporin A cellular uptake and cytotoxicity. *J. Pharm. Sci.* 97: 2350-2361.