

Annexin V (R-20): sc-1929

BACKGROUND

The Annexin family of calcium-binding proteins is composed of at least ten mammalian genes and is characterized by a conserved core domain which binds 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 exhibits a more limited distribution. Where co-expressed in the same tissues, 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.

CHROMOSOMAL LOCATION

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

SOURCE

Annexin V (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Annexin V of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1929 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Annexin V (R-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 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (R-20) is also recommended for detection of Annexin V in additional species, including 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.

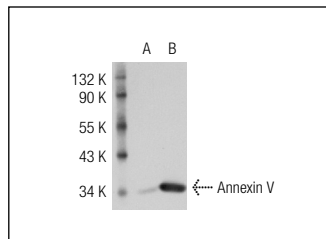
Molecular Weight of Annexin V: 36 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Annexin V (m): 293T Lysate: sc-118434 or HeLa whole cell lysate: sc-2200.

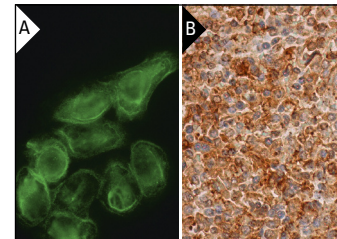
STORAGE

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

DATA



Annexin V (R-20): sc-1929. 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.



Annexin V (R-20): sc-1929. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp (B).

SELECT PRODUCT CITATIONS

- Matteo, R.G., et al. 2000. Immunolocalization of Annexins IV, V and VI in the failing and non-failing human heart. *Cardiovasc. Res.* 45: 961-970.
- Kolialexi, A., et al. 2001. Use of Annexin V antibody to identify apoptotic cells during pregnancy. *Ann. N.Y. Acad. Sci.* 945: 145-150.
- Verbrugghe, P., et al. 2006. Murine M cells express Annexin V specifically. *J. Pathol.* 209: 240-249.
- Trouvé, P., et al. 2007. Annexin V is directly involved in cystic fibrosis transmembrane conductance regulator's chloride channel function. *Biochim. Biophys. Acta* 1772: 1121-1133.
- Le Drévo, M.A., et al. 2008. Annexin A5 increases the cell surface expression and the chloride channel function of the DeltaF508-cystic fibrosis transmembrane regulator. *Biochim. Biophys. Acta* 1782: 605-614.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.