

Annexin V (FL-319): sc-8300

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.

REFERENCES

1. Smith, P.D., et al. 1994. Structural evolution of the Annexin supergene family. *Trends Genet.* 10: 241-246.
2. Reutelingsperger, C.P., et al. 1994. Differential tissue expression of Annexin VIII in human. *FEBS Lett.* 349: 120-124.

SOURCE

Annexin V (FL-319) is a rabbit polyclonal antibody raised against amino acids 1-319 representing full length 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.

APPLICATIONS

Annexin V (FL-319) is recommended for detection of Annexin V and, to a lesser extent, Annexin IV and Annexin VI 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Annexin V (FL-319) is also recommended for detection of Annexin V and, to a lesser extent, Annexin IV and Annexin VI in additional species, including equine, canine, bovine and porcine.

Molecular Weight of Annexin V: 36 kDa.

Positive Controls: Annexin V (m): 293T Lysate: sc-118434, HeLa whole cell lysate: sc-2200 or KNRK whole cell lysate: sc-2214.

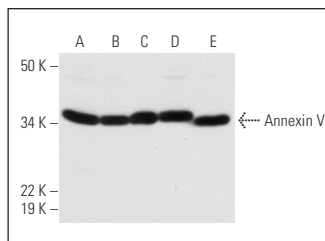
STORAGE

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

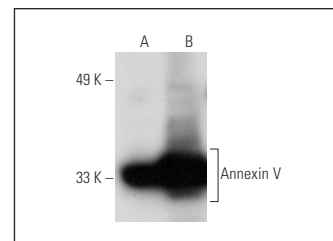
RESEARCH USE

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

DATA



Annexin V (FL-319): sc-8300. Western blot analysis of Annexin V expression in HeLa (A), JAR (B), THP-1 (C), NIH/3T3 (D) and KNRK (E) whole cell lysates.



Annexin V (FL-319): sc-8300. 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. Filipenko, N.R., et al. 2004. Annexin A2 is a novel RNA-binding protein. *J. Biol. Chem.* 279: 8723-8731.
2. Xu, L., et al. 2005. Activation of the discoidin domain receptor 2 induces expression of matrix metalloproteinase 13 associated with osteoarthritis in mice. *J. Biol. Chem.* 280: 549-555.
3. Campos, B., et al. 2006. Determination of non-bilayer phospholipid arrangements and their antibodies in placenta and sera of patients with hypertensive disorders of pregnancy. *Placenta* 27: 215-224.
4. Xiao, Z., et al. 2007. Analysis of the extracellular matrix vesicle proteome in mineralizing osteoblasts. *J. Cell. Physiol.* 210: 325-335.
5. Gabr, A.A., et al. 2007. Alterations in cytoskeletal and immune function-related proteome profiles in whole rat lung following intratracheal instillation of heparin. *Respir. Res.* 8: 36.
6. De Paola, M., et al. 2008. Morphological features and responses to AMPA receptor-mediated excitotoxicity of mouse motor neurons: comparison in purified, mixed anterior horn or motor neuron/glia cocultures. *J. Neurosci. Methods* 170: 85-95.
7. Fortin, C.F., et al. 2010. MT6-MMP is present in lipid rafts and faces inward in living human PMNs but translocates to the cell surface during neutrophil apoptosis. *Int. Immunol.* 22: 637-649.
8. Madureira, P.A., et al. 2011. Annexin A2 is a novel cellular redox regulatory protein involved in tumorigenesis. *Oncotarget* 2: 1075-1093.
9. Faria, D., et al. 2011. Effect of Annexin A5 on CFTR: regulated traffic or scaffolding? *Mol. Membr. Biol.* 28: 14-29.
10. Peiris, D., et al. 2015. Identification of O-linked glycoproteins binding to the lectin helix pomatia agglutinin as markers of metastatic colorectal cancer. *PLoS ONE* 10: e0138345.

PROTOCOLS

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