

# Annexin V (h3): 293T Lysate: sc-170257

## 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. 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.
5. Rothhut, B., et al. 1995. Inhibitory effect of Annexin V on protein kinase C activity in mesangial cell lysates. *Euro. J. Biochem.* 232: 865-872.
6. Maillard, W.S., et al. 1996. Calcium-dependent binding of S100C to the N-terminal domain of Annexin I. *J. Biol. Chem.* 271: 719-725.
7. Favier-Perron, B., et al. 1996. The high-resolution crystal structure of human Annexin III shows subtle differences with Annexin V. *Biochem.* 35: 1740-1744.
8. Liemann, S., et al. 1996. Structural and functional characterization of the voltage sensor in the ion channel human Annexin V. *J. Mol. Biol.* 258: 555-561.

## CHROMOSOMAL LOCATION

Genetic locus: ANXA5 (human) mapping to 4q27.

## PRODUCT

Annexin V (h3): 293T Lysate represents a lysate of human Annexin V transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## RESEARCH USE

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

## APPLICATIONS

Annexin V (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive Annexin V antibodies. Recommended use: 10-20 µl per lane.

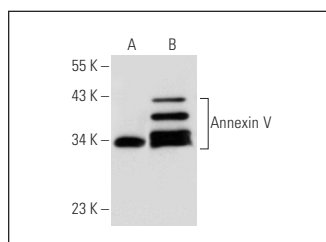
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Annexin V (H-3): sc-74438 is recommended as a positive control antibody for Western Blot analysis of enhanced human Annexin V expression in Annexin V transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



Annexin V (H-3): sc-74438. Western blot analysis of Annexin V expression in non-transfected: sc-117752 (A) and human Annexin V transfected: sc-170257 (B) 293T whole cell lysates.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.