

# Annexin IV (4): sc-135831

## 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.

## 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. Rothhut, B., et al. 1995. Inhibitory effect of Annexin V on protein kinase C activity in mesangial cell lysates. *Eur. J. Biochem.* 232: 865-872.
4. Mailliard, et al. 1996. Calcium-dependent binding of S100C to the N-terminal domain of Annexin I. *J. Biol. Chem.* 271: 719-725.
5. Favier-Perron, B., et al. 1996. The high-resolution crystal structure of human Annexin III shows subtle differences with Annexin V. *Biochemistry* 35: 1740-1744.
6. 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: ANXA4 (human) mapping to 2p13.3; Anxa4 (mouse) mapping to 6 D1.

## SOURCE

Annexin IV (4) is a mouse monoclonal antibody raised against amino acids 1-319 representing full length Annexin IV of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

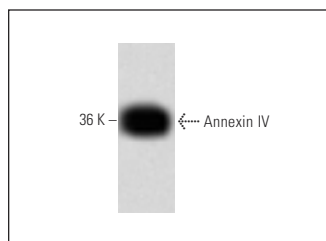
Annexin IV (4) is recommended for detection of Annexin IV of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Annexin IV siRNA (h): sc-29684, Annexin IV siRNA (m): sc-29685, Annexin IV shRNA Plasmid (h): sc-29684-SH, Annexin IV shRNA Plasmid (m): sc-29685-SH, Annexin IV shRNA (h) Lentiviral Particles: sc-29684-V and Annexin IV shRNA (m) Lentiviral Particles: sc-29685-V.

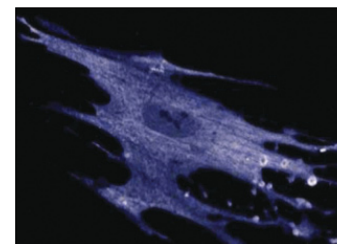
Molecular Weight of Annexin IV: 34 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, Hep G2 cell lysate: sc-2227 or RAW 309 Cr.1 cell lysate: sc-3814.

## DATA



Annexin IV (4): sc-135831. Western blot analysis of Annexin IV expression in human endothelial whole cell lysate.



Annexin IV (4): sc-135831. Immunofluorescence staining of WI-38 cells showing nuclear and cytoplasmic localization.

## RESEARCH USE

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