SANTA CRUZ BIOTECHNOLOGY, INC.

# Annexin IV (FL-319): sc-28827

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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. and Moss, S.E. 1994. Structural evolution of the Annexin supergene family. Trends Genet. 10: 241-246.
2. Chan, H.C., Kaetzel, M.A., Gotter, A.L., Dedman, J.R. and Nelson, D.J. 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., Dubois, T., Feliers, D., Russo-Marie, F. and Oudinet, J.P. 1995. Inhibitory effect of Annexin V on protein kinase C activity in mesangial cell lysates. Eur. J. Biochem. 232: 865-872.


## SOURCE

Annexin IV (FL-319) is a rabbit polyclonal antibody raised against amino acids 1-319 representing full length Annexin IV 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 IV (FL-319) is recommended for detection of Annexin IV, and to a lesser extent, Annexin V, VIII and XI 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 IV (FL-319) is also recommended for detection of Annexin IV, and to a lesser extent, Annexin V, VIII and XI in additional species, including equine.

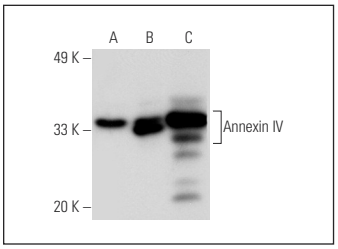
Molecular Weight of Annexin IV: 34 kDa.

Positive Controls: Annexin IV (h): 293T Lysate: sc-116679 or Hep G2 cell lysate: sc-2227.

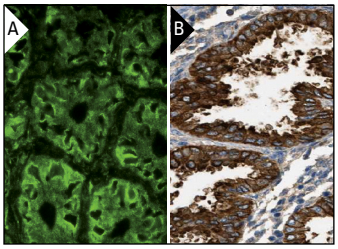
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA




Annexin IV (FL-319): sc-28827. Western blot analysis of Annexin IV expression in non-transfected 293T: sc-117752 (**A**), human Annexin IV transfected 293T: sc-116679 (**B**) and Hep G2 (**C**) whole cell lysates.




Annexin IV (FL-319): sc-28827. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human corpus uterine tissue showing cytoplasmic and membrane staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

## SELECT PRODUCT CITATIONS


1. Wang, R.C., Huang, C.Y., Pan, T.L., Chen, W.Y., Ho, C.T., Liu, T.Z. and Chang, Y.J. 2015. Proteomic characterization of Annexin I (ANX1) and heat shock protein 27 (HSP27) as biomarkers for invasive hepatocellular carcinoma cells. PLoS ONE 10: e0139232.


## 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.