SANTA CRUZ BIOTECHNOLOGY, INC.

# Annexin V (H-3): sc-74438

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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 coexpressed 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.


## CHROMOSOMAL LOCATION

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

## SOURCE

Annexin V (H-3) is a mouse monoclonal antibody raised against amino acids 1-319 representing full length Annexin V of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2a}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Annexin V (H-3) is available conjugated to agarose (sc-74438 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-74438 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74438 PE), fluorescein (sc-74438 FITC), Alexa Fluor® 488 (sc-74438 AF488), Alexa Fluor® 546 (sc-74438 AF546), Alexa Fluor® 594 (sc-74438 AF594) or Alexa Fluor® 647 (sc-74438 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74438 AF680) or Alexa Fluor® 790 (sc-74438 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.



## STORAGE

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

## APPLICATIONS

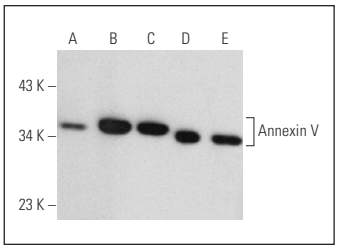
Annexin V (H-3) is recommended for detection of Annexin V of mouse, rat and huamn origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Annexin V siRNA (h): sc-29686, Annexin V siRNA (m): sc-29687, Annexin V siRNA (r): sc-270107, Annexin V shRNA Plasmid (h): sc-29686-SH, Annexin V shRNA Plasmid (m): sc-29687-SH, Annexin V shRNA Plasmid (r): sc-270107-SH, Annexin V shRNA (h) Lentiviral Particles: sc-29686-V, Annexin V shRNA (m) Lentiviral Particles: sc-29687-V and Annexin V shRNA (r) Lentiviral Particles: sc-270107-V.

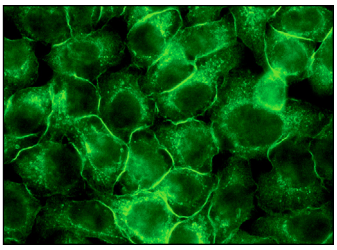
Molecular Weight of Annexin V: 36 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, LADMAC whole cell lysate: sc-364189 or Sol8 cell lysate: sc-2249.

## DATA




Annexin V (H-3): sc-74438. Western blot analysis of Annexin V expression in Jurkat (**A**), LADMAC (**B**), Sol8 (**C**) and L8 (**D**) whole cell lysates and rat ovary tissue extract (**E**).



Annexin V (H-3): sc-74438. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane staining.

## SELECT PRODUCT CITATIONS


1. Martin, J.N., et al. 2009. Transcriptional and proteomic profiling in a cellular model of DYT1 dystonia. Neuroscience 164: 563-572.
2. Laperle, A., et al. 2015. α-5 laminin synthesized by human pluripotent stem cells promotes self-renewal. Stem Cell Rep. 5: 195-206.
3. Chiu, C.T., et al. 2016. Reparixin attenuates neuronal injury in experimental *Klebsiella pneumoniae* meningoencephalitis through dual effects on neuroprotection and neuroinflammation. Neuropathol. Appl. Neurobiol. 42: 326-343.
4. Khaiboullina, S., et al. 2019. Transcriptome profiling reveals pro-inflammatory cytokines and matrix metalloproteinase activation in zika virus infected human umbilical vein endothelial cells. Front. Pharmacol. 10: 642.
5. Wu, L., et al. 2021. Domino effect of IL-15 and CD8 T cell-mediated neuronal apoptosis in experimental traumatic brain injury. J. Neurotrauma 38: 1450-1463.


## RESEARCH USE

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