## SANTA CRUZ BIOTECHNOLOGY, INC.

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



## 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 Ca2+-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 Ca2+ channel activity. Similarly, Annexin V has ion channel properties. Annexin IV, also referred to as endonexin, functions to regulate CI-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.
- 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  $\mu g$  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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## **STORAGE**

Store at 4° C, \*\*D0 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  $\mu$ g per 100-500  $\mu$ g 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: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or HUV-EC-C whole cell lysate: sc-364180.

#### DATA





Annexin V (H-3): sc-74438. Fluorescent western blot analysis of Annexin V expression in HUV-EC-C (**A**), U-87 MG (**B**), HeLa (**C**), THP-1 (**D**) and NIH/313 (**E**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG<sub>2a</sub> BP-CFL 555: sc-542736.

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.
- Piatek, P., et al. 2022. Changes within H3K4me3-marked histone reveal molecular background of neutrophil functional plasticity. Front. Immunol. 13: 906311.
- Lin, S., et al. 2023. Annexin A3 accelerates osteoclast differentiation by promoting the level of RANK and TRAF6. Bone 172: 116758.
- Niazi, A., et al. 2024. Microvilli regulate the release modes of α-tectorin to organize the domain-specific matrix architecture of the tectorial membrane. bioRxiv. E-published.

## **RESEARCH USE**

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