SANTA CRUZ BIOTECHNOLOGY, INC.

Annexin VII (H-111): sc-11389

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. The annexin family has been implicated as regulators of such diverse processes as ion-flux, endocytosis and exocytosis, and cellular adhesion. When overexpressed in A-431 cells, Annexin VI causes a partial reversal of the transformed phenotype. It has been hypothesized that growth-dependent posttranslational modifications of annexins are required for proper subcellular localization. Annexin VII, also referred to as synexin, is located at the plasma membrane in normal muscle tissue. However, in muscle samples from patients suffering from Duchenne's muscular dystrophy, Annexin VII, along with Annexin IV and VI, are released into the cytoplasm and later, as the disease progresses, into the extracellular space. Two forms of Annexin XI, designated A and B, have been identified. Transfection of COS-7 cells with Annexin XI-A, but not Annexin XI-B, causes formation of Annexin XI-associated vesicles.

REFERENCES

1. Smith, P.D., et al. 1994. Structural evolution of the annexin supergene family. Trends Genet. 10: 241-246.
2. Edwards, H.C., et al. 1995. Functional and genetic analysis of annexin VI. Mol. Cell. Biochem. 149-150: 293-299.
3. Waisman, D.M. 1995. Annexin II tetramer: structure and function. Mol. Cell. Biochem. 149-150: 301-322.
4. Chasserot-Golaz, S., et al. 1996. Annexin II in exocytosis: catecholamine secretion requires the translocation of p36 to the subplasmalemmal region in chromaffin cells. J. Cell Biol. 133: 1217-1236.
5. Mailliard, W.S., et al. 1996. Calcium-dependent binding of S-100C to the N-terminal domain of annexin I. J. Biol. Chem. 271: 719-725.

CHROMOSOMAL LOCATIONAL

Genetic locus: ANXA7 (human) mapping to 10q22.2; Anxa7 (mouse) mapping to 14 A3.

SOURCE

Annexin VII (H-111) is a rabbit polyclonal antibody raised against amino acids 9-119 of Annexin VII 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.

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.

APPLICATIONS

Annexin VII (H-111) is recommended for detection of Annexin VII 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).

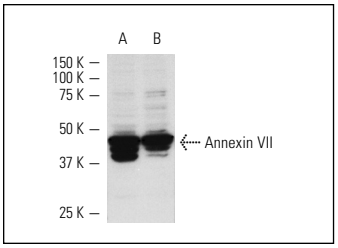
Suitable for use as control antibody for Annexin VII siRNA (h): sc-29690, Annexin VII siRNA (m): sc-29691, Annexin VII shRNA Plasmid (h): sc-29690-SH, Annexin VII shRNA Plasmid (m): sc-29691-SH, Annexin VII shRNA (h) Lentiviral Particles: sc-29690-V and Annexin VII shRNA (m) Lentiviral Particles: sc-29691-V.

Molecular Weight of Annexin VII muscle atypic isoform: 47 kDa.

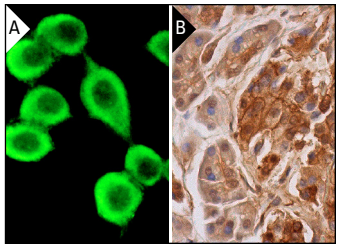
Molecular Weight of Annexin VII normal skeletal muscle isoform: 51 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

DATA



Annexin VII (H-111): sc-11389. Western blot analysis of Annexin VII expression in Jurkat (**A**) and HeLa (**B**) whole cell lysates.



Annexin VII (H-111): sc-11389. Immunofluorescence staining of methanol-fixed KNRK cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic and nuclear staining of exocrine glandular cells and cytoplasmic, membrane and nuclear staining of Islets of Langerhans (**B**).

SELECT PRODUCT CITTIONS

1. Xin, W., et al. 2003. Dysregulation of the annexin family protein family is associated with prostate cancer progression. Am. J. Pathol. 162: 255-261.
2. Wang, L., et al. 2010. Distinct patterns of autophagy evoked by two benzoxazine derivatives in vascular endothelial cells. Autophagy 6: 1115-1124.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.