

Annexin VII (G-8): sc-55488

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 Ca²⁺-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 Annexins 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. and Moss, S.E. 1994. Structural evolution of the Annexin supergene family. *Trends Genet.* 10: 241-246.
2. Edwards, H.C. and Moss, S.E. 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.
6. Selbert, S., et al. 1996. Annexin VII relocation as a result of dystrophin deficiency. *Exp. Cell Res.* 222: 199-208.

CHROMOSOMAL LOCATION

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

SOURCE

Annexin VII (G-8) is a mouse monoclonal antibody raised against amino acids 9-119 of Annexin VII of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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.

APPLICATIONS

Annexin VII (G-8) is recommended for detection of Annexin VII of mouse, rat and human 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 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.

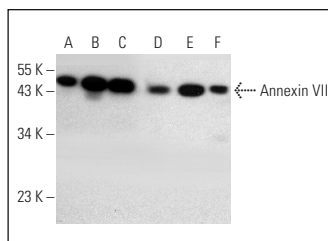
Molecular Weight of Annexin VII normal skeletal muscle isoform: 51 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, PC-3 cell lysate: sc-2220 or SK-BR-3 cell lysate: sc-2218.

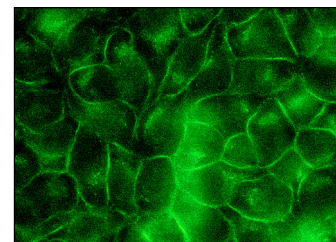
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Annexin VII (G-8): sc-55488. Western blot analysis of Annexin VII expression in Jurkat (A), PC-3 (B), SK-BR-3 (C), WEHI-3 (D), RAW 264.7 (E) and A-10 (F) whole cell lysates.



Annexin VII (G-8): sc-55488. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Li, Z., et al. 2012. Early proteome analysis of rat pancreatic acinar AR42J cells treated with taurolythocholic acid 3-sulfate. *Pancreatology* 12: 248-256.

RESEARCH USE

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