

# Annexin II (D1/274.5): sc-65873

## 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. The interaction between these proteins and biological membranes has led to the hypothesis that they are involved in cellular trafficking processes such as endocytosis, exocytosis and cellular adhesion. Annexin I, alternatively referred to as lipocortin, has been implicated as a mediator of the anti-inflammatory response produced by glucocorticoids and as an inhibitor of  $cPLA_2$ , a potent mediator of inflammation. Annexin II, also called p36, exists as a monomer or as a heterotetramer, complexed with the S-100-related protein p11. This complex is termed calpactin I. In the tetrameric form, Annexin II is an efficient substrate of PKC family and Src pp60.

## REFERENCES

1. Smith, P.D. and Moss, S.E. 1994. Structural evolution of the Annexin supergene family. *Trends Genet.* 10: 241-246.
2. Waisman, D.M. 1995. Annexin II tetramer: structure and function. *Mol. Cell. Biochem.* 149-150: 301-332.
3. McLeod, J.D. and Bolton, C. 1995. Dexamethasone induces an increase in intracellular and membrane-associated lipocortin-1 (Annexin-1) in rat astrocyte primary cultures. *Cell. Mol. Neurobiol.* 15: 193-205.
4. Hubaishy, I., et al. 1995. Modulation of Annexin II tetramer by tyrosine phosphorylation. *Biochemistry* 34: 14527-14534.
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. Croxtal, J.D., et al. 1996. The concerted regulation of  $cPLA_2$ , COX2, and lipocortin 1 expression by IL-1 $\beta$  in A549 cells. *Biochem. Biophys. Res. Commun.* 220: 491-495.
7. 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.

## CHROMOSOMAL LOCATION

Genetic locus: ANXA2 (human) mapping to 15q22.2; Anxa2 (mouse) mapping to 9 C.

## SOURCE

Annexin II (D1/274.5) is a mouse monoclonal antibody raised against AG1523 fibroblasts of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml 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 II (D1/274.5) is recommended for detection of Annexin II of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Annexin II siRNA (h2): sc-270151, Annexin II siRNA (m): sc-29683, Annexin II shRNA Plasmid (h2): sc-270151-SH, Annexin II shRNA Plasmid (m): sc-29683-SH, Annexin II shRNA (h2) Lentiviral Particles: sc-270151-V and Annexin II shRNA (m) Lentiviral Particles: sc-29683-V.

Molecular Weight of Annexin II monomer: 36 kDa.

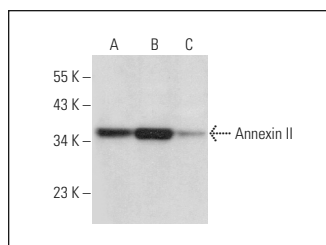
Molecular Weight of Annexin II heterotetramer: 90 kDa.

Positive Controls: ECV304 cell lysate: sc-2269, HUV-EC-C whole cell lysate: sc-364180 or WI-38 whole cell lysate: sc-364260.

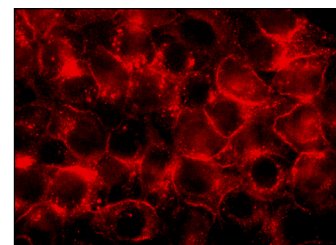
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 II (D1/274.5): sc-65873. Western blot analysis of Annexin II expression in ECV304 (A), HUV-EC-C (B) and WI-38 (C) whole cell lysates.



Annexin II (D1/274.5): sc-65873. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

## RESEARCH USE

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



See **Annexin II (C-10): sc-28385** for Annexin II antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.