

# p-Annexin II (85.Tyr 24): sc-135753

## 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. Annexin II is subject to phosphorylation on specific amino acid residues, such as Tyr 24.

## CHROMOSOMAL LOCATION

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

## SOURCE

p-Annexin II (85.Tyr 24) is a mouse monoclonal antibody raised against a short amino acid sequence containing Tyr 24 phosphorylated Annexin II of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-Annexin II (85.Tyr 24) is available conjugated to agarose (sc-135753 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-135753 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA.

## APPLICATIONS

p-Annexin II (85.Tyr 24) is recommended for detection of Tyr 24 phosphorylated 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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 p-Annexin II monomer: 36 kDa.

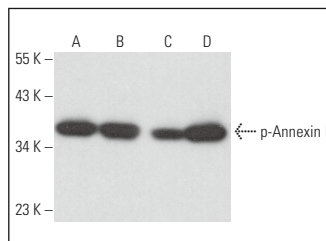
Molecular Weight of p-Annexin II heterotetramer: 90 kDa.

Positive Controls: COLO 205 whole cell lysate: sc-364177, JAR cell lysate: sc-2276 or EOC 20 whole cell lysate: sc-364187.

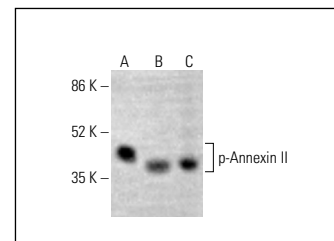
## STORAGE

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

## DATA



p-Annexin II (85.Tyr 24): sc-135753. Western blot analysis of Annexin II phosphorylation in JAR (A), COLO 205 (B), NIH/3T3 (C) and EOC 20 (D) whole cell lysates.



p-Annexin II (85.Tyr 24): sc-135753. Western blot analysis of Annexin II phosphorylation in HeLa (A), K-562 (B) and HCT-116 (C) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

## SELECT PRODUCT CITATIONS

- Raddum, A.M., et al. 2013. Domains I and IV of Annexin A2 affect the formation and integrity of *in vitro* capillary-like networks. *PLoS ONE* 8: e60281.
- Bouwman, F.G., et al. 2014. Increased  $\beta$ -oxidation with improved glucose uptake capacity in adipose tissue from obese after weight loss and maintenance. *Obesity* 22: 819-827.
- Grindheim, A.K., et al. 2016. Reactive oxygen species exert opposite effects on Tyr23 phosphorylation of the nuclear and cortical pools of Annexin A2. *J. Cell Sci.* 129: 314-328.
- Fan, Y., et al. 2019. Rack1 mediates tyrosine phosphorylation of Anxa2 by Src and promotes invasion and metastasis in drug-resistant breast cancer cells. *Breast Cancer Res.* 21: 66.
- Zhao, C., et al. 2020. CCL18 promotes the invasion and metastasis of breast cancer through Annexin A2. *Oncol. Rep.* 43: 571-580.
- Li, Y., et al. 2020. S100A10 accelerates aerobic glycolysis and malignant growth by activating mTOR-signaling pathway in gastric cancer. *Front. Cell Dev. Biol.* 8: 559486.
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- Tsen, S.D., et al. 2021. Non-invasive monitoring of arthritis treatment response via targeting of tyrosine-phosphorylated Annexin A2 in chondrocytes. *Arthritis Res. Ther.* 23: 265.
- Weng, M., et al. 2023. Pseudorabies virus regulates the extracellular translocation of Annexin A2 to promote its proliferation. *J. Virol.* 97: e0154522.

## RESEARCH USE

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