

# Annexin II (C-10): sc-28385

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Annexin II (C-10) is a mouse monoclonal antibody raised against amino acids 1-50 of Annexin II of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Annexin II (C-10) is available conjugated to agarose (sc-28385 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28385 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28385 PE), fluorescein (sc-28385 FITC), Alexa Fluor® 488 (sc-28385 AF488), Alexa Fluor® 546 (sc-28385 AF546), Alexa Fluor® 594 (sc-28385 AF594) or Alexa Fluor® 647 (sc-28385 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28385 AF680) or Alexa Fluor® 790 (sc-28385 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Annexin II (C-10) is recommended for detection of Annexin II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:2000), 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), 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 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.

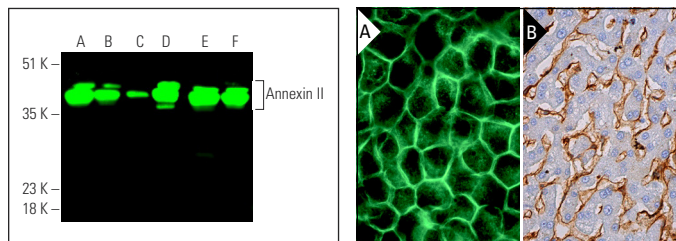
Molecular Weight of Annexin II monomer: 36 kDa.

Molecular Weight of Annexin II heterotetramer: 90 kDa.

## STORAGE

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

## DATA



Annexin II (C-10): sc-28385. Near-infrared western blot analysis of Annexin II expression in HeLa (A), K-562 (B), NIH/3T3 (C), KNRK (D), ECV304 (E) and A-431 (F) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

Annexin II (C-10): sc-28385. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing membrane and cytoplasmic staining of hepatic sinusoidal cells (B).

## SELECT PRODUCT CITATIONS

- Shaw, M.L., et al. 2008. Cellular proteins in influenza virus particles. *PLoS Pathog.* 4: e1000085.
- Nguyen, T.T.T., et al. 2022. Tryptophan-dependent and -independent secretions of tryptophanyl-tRNA synthetase mediate innate inflammatory responses. *Cell Rep.* 42: 111905.
- Sveeggen, T.M., et al. 2023. Annexin A2 modulates phospholipid membrane composition upstream of Arp2 to control angiogenic sprout initiation. *FASEB J.* 37: e22715.
- Lin, S., et al. 2023. Annexin A3 accelerates osteoclast differentiation by promoting the level of RANK and TRAF6. *Bone* 172: 116758.
- Hosseinkhani, B., et al. 2023. Cerebral microvascular endothelial cell-derived extracellular vesicles regulate blood-brain barrier function. *Fluids Barriers CNS* 20: 95.
- Hamdi, M., et al. 2024. Oviductal extracellular vesicles miRNA cargo varies in response to embryos and their quality. *BMC Genomics* 25: 520.
- Shi, S., et al. 2024. FGF19 promotes nasopharyngeal carcinoma progression by inducing angiogenesis via inhibiting TRIM21-mediated ANXA2 ubiquitination. *Cell. Oncol.* 47: 283-301.
- Tian, X., et al. 2024. Multi-omics profiling identifies microglial annexin A2 as a key mediator of NFκB pro-inflammatory signaling in ischemic reperfusion injury. *Mol. Cell. Proteomics* 23: 100723.
- Koh, M., et al. 2024. ANXA2 (annexin A2) is crucial to ATG7-mediated autophagy, leading to tumor aggressiveness in triple-negative breast cancer cells. *Autophagy*. 20: 659-674.

## RESEARCH USE

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

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