

Annexin III (G-1): sc-390700

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 Ca²⁺-dependent manner, and a unique amino-terminal region, which may confer binding specificity. Annexin family members have been implicated as regulators of such diverse processes as ion flux, endocytosis, exocytosis and cellular adhesion. Annexin III, also known as ANXA3, Annexin A3, Lipocortin III, PAP-III (placental anticoagulant protein III), 35- α calcimedlin or ANX3, belongs to the annexin family and contains four Annexin repeats. Annexin III exhibits a variety of functions, including anti-coagulant properties, an inhibitory role towards phospholipase A₂ (PLA₂) and an enzymatic function, cleaving the cyclic bond of inositol 1,2-cyclic phosphate to produce inositol 1-phosphate.

REFERENCES

1. Tait, J.F., et al. 1991. Chromosomal localization of the human Annexin III (ANX3) gene. *Genomics* 10: 441-448.
2. Tait, J.F., et al. 1993. Structure and polymorphisms of the human Annexin III (ANX3) gene. *Genomics* 18: 79-86.
3. Bödeker, H., et al. 1999. PAP I interacts with itself, PAP II, PAP III, and lithostathine/regl α . *Mol. Cell Biol. Res. Commun.* 2: 150-154.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 106490. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: ANXA3 (human) mapping to 4q21.21.

SOURCE

Annexin III (G-1) is a mouse monoclonal antibody raised against amino acids 1-50 mapping at the N-terminus of Annexin III of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Annexin III (G-1) is available conjugated to agarose (sc-390700 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390700 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390700 PE), fluorescein (sc-390700 FITC), Alexa Fluor[®] 488 (sc-390700 AF488), Alexa Fluor[®] 546 (sc-390700 AF546), Alexa Fluor[®] 594 (sc-390700 AF594) or Alexa Fluor[®] 647 (sc-390700 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390700 AF680) or Alexa Fluor[®] 790 (sc-390700 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

Annexin III (G-1) is recommended for detection of Annexin III of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 III siRNA (h): sc-89288, Annexin III shRNA Plasmid (h): sc-89288-SH and Annexin III shRNA (h) Lentiviral Particles: sc-89288-V.

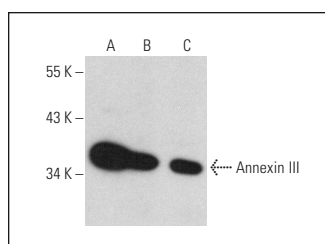
Molecular Weight of Annexin III: 36 kDa.

Positive Controls: human placenta extract: sc-363772, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

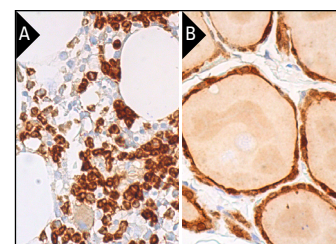
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Annexin III (G-1): sc-390700. Western blot analysis of Annexin III expression in human placenta tissue extract (A) and Hep G2 (B) and HeLa (C) whole cell lysates.



Annexin III (G-1): sc-390700. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of erythrocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic and nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Huang, H.M., et al. 2022. Mechanical force-promoted osteoclastic differentiation via periodontal ligament stem cell exosomal protein ANXA3. *Stem Cell Reports* 17: 1842-1858.

RESEARCH USE

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