

GAPR-1 (B-5): sc-398783

BACKGROUND

Cysteine-rich secretory proteins (CRISPs) represent a family of evolutionarily conserved proteins that may play a role in the innate immune system and are transcriptionally regulated by androgens in several tissues. GAPR-1 (Golgi-associated plant pathogenesis-related protein 1), also known as GLIPR2, is a 154 amino acid lipid anchor protein belonging to the CRISP family. GAPR-1 also shares similarity with the pathogenesis-related protein (PR) superfamily, and may play an important role in the immune system. Existing as a homodimer, GAPR-1 is highly expressed in lung and peripheral leukocytes with minor expression in liver and kidney. Containing a conserved sperm-coating protein (SCP) domain, GAPR-1 binds to negatively charged lipids and may be involved in the differentiation of epithelial cells into mesenchymal cells. Increased expression of GAPR-1 in kidney may contribute to the development of fibrosis.

REFERENCES

1. Eisenberg, I., et al. 2002. Cloning and characterization of a human novel gene C9orf19 encoding a conserved putative protein with an SCP-like extracellular protein domain. *Gene* 293: 141-148.
2. Eberle, H.B., et al. 2002. Identification and characterization of a novel human plant pathogenesis-related protein that localizes to lipid-enriched microdomains in the Golgi complex. *J. Cell Sci.* 115: 827-838.
3. Groves, M.R., et al. 2004. Crystallization of a Golgi-associated PR-1-related protein (GAPR-1) that localizes to lipid-enriched microdomains. *Acta Crystallogr. D Biol. Crystallogr.* 60: 730-732.
4. Serrano, R.L., et al. 2004. Structural analysis of the human Golgi-associated plant pathogenesis related protein GAPR-1 implicates dimerization as a regulatory mechanism. *J. Mol. Biol.* 339: 173-183.
5. Baxter, R.M., et al. 2007. The plant pathogenesis related protein GLIPR-2 is highly expressed in fibrotic kidney and promotes epithelial to mesenchymal transition *in vitro*. *Matrix Biol.* 26: 20-29.
6. Vadnais, M.L., et al. 2008. Molecular cloning and expression of the CRISP family of proteins in the boar. *Biol. Reprod.* 79: 1129-1134.
7. Gibbs, G.M., et al. 2008. The CAP superfamily: cysteine-rich secretory proteins, antigen 5, and pathogenesis-related 1 proteins—roles in reproduction, cancer, and immune defense. *Endocr. Rev.* 29: 865-897.
8. Cohen, D.J., et al. 2008. Participation of cysteine-rich secretory proteins (CRISP) in mammalian sperm-egg interaction. *Int. J. Dev. Biol.* 52: 737-742.

CHROMOSOMAL LOCATION

Genetic locus: GLIPR2 (human) mapping to 9p13.3.

SOURCE

GAPR-1 (B-5) is a mouse monoclonal antibody raised against amino acids 1-154 representing full length GAPR-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GAPR-1 (B-5) is recommended for detection of GAPR-1 of 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 GAPR-1 siRNA (h): sc-92741, GAPR-1 shRNA Plasmid (h): sc-92741-SH and GAPR-1 shRNA (h) Lentiviral Particles: sc-92741-V.

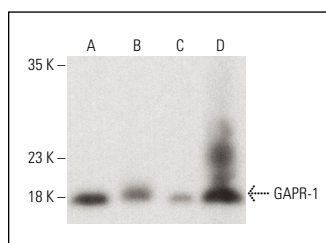
Molecular Weight of GAPR-1: 17 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182, Jurkat whole cell lysate: sc-2204 or Y79 cell lysate: sc-2240.

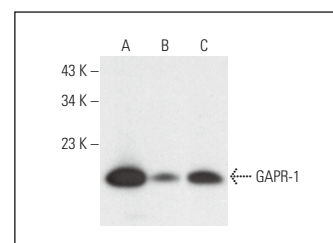
RECOMMENDED SUPPORT REAGENTS

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



GAPR-1 (B-5): sc-398783. Western blot analysis of GAPR-1 expression in AML-193 (A), U-251-MG (B), Jurkat (C) and human PBL (D) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



GAPR-1 (B-5): sc-398783. Western blot analysis of GAPR-1 expression in AML-193 (A), Y79 (B) and Jurkat (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cypryk, W., et al. 2017. Proteomic and bioinformatic characterization of extracellular vesicles released from human macrophages upon influenza A virus infection. *J. Proteome Res.* 16: 217-227.

STORAGE

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

RESEARCH USE

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