

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

- 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.
- 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.
- 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.
- 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.
- 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.
- Vadnais, M.L., et al. 2008. Molecular cloning and expression of the CRISP family of proteins in the boar. *Biol. Reprod.* 79: 1129-1134.
- 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.
- 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.

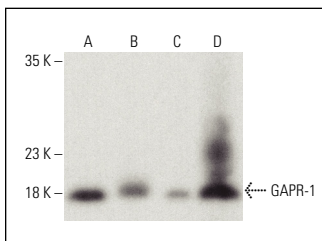
Molecular Weight of GAPR-1: 17 kDa.

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

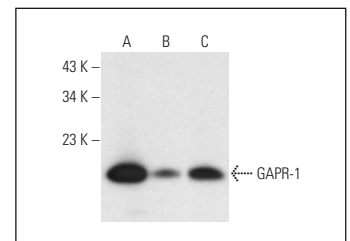
RECOMMENDED SUPPORT REAGENTS

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

- 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.