SANTA CRUZ BIOTECHNOLOGY, INC.

GPAA1 (B-10): sc-514538

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glycosylphosphatidylinositol (GPI) acts as a membrane anchor for cell surface proteins. Glycosylphosphatidylinositol anchor attachment 1 protein (GPAA1), also designated GPI anchor attachment protein 1 or GAA1 protein homolog, is a membrane protein localized to the endoplasmic reticulum which is involved in GPI-anchor biosynthesis. GPAA1 is crucial for GPI-anchoring of precursor proteins and catalyzes the attachment of GPI to proteins containing a C-terminal GPR attachment signal. GAA1 contains an N-terminal signal sequence, one cAMP- and cGMP-dependent protein kinase phosphorylation site, two potential N-glycosylation sites, one leucine zipper pattern and eight putative transmembrane domains. GPAA1 is ubiquitously expressed and shows higher levels of expression in fetal tissues than in adult tissues.

REFERENCES

1. Inoue, N., et al. 1999. Human and mouse GPAA1 (glycosylphosphatidylinositol anchor attachment 1) genes: genomic structures, chromosome loci and the presence of a minor class intron. Cytogenet. Cell Genet. 84: 199-205.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603048. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Joh, T., et al. 2005. *Helicobacter pylori* eradication decreases the expression of glycosylphosphatidylinositol-anchored complement regulators, decay-accelerating factor and homologous restriction factor 20, in human gastric epithelium. J. Gastroenterol. Hepatol. 20: 1344-1351.
4. Hutchinson, T.E., et al. 2005. Phospholipase C sensitive GPI-anchored proteins of goat sperm: possible role in sperm protection. Anim. Reprod. Sci. 88: 271-286.
5. Azzouz, N., et al. 2005. Removal of phospholipid contaminants through precipitation of glycosylphosphatidylinositols. Anal. Biochem. 343: 152-158.

CHROMOSOMAL LOCATION

Genetic locus: GPAA1 (human) mapping to 8q24.3; Gpaa1 (mouse) mapping to 15 D3.

SOURCE

GPAA1 (B-10) is a mouse monoclonal antibody raised against amino acids 46-356 mapping near the N-terminus of GPAA1 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.

GPAA1 (B-10) is available conjugated to agarose (sc-514538 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514538 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514538 PE), fluorescein (sc-514538 FITC), Alexa Fluor® 488 (sc-514538 AF488), Alexa Fluor® 546 (sc-514538 AF546), Alexa Fluor® 594 (sc-514538 AF594) or Alexa Fluor® 647 (sc-514538 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514538 AF680) or Alexa Fluor® 790 (sc-514538 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GPAA1 (B-10) is recommended for detection of GPAA1 isoforms 1 and 2 of mouse, rat and 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 GPAA1 siRNA (h): sc-60715, GPAA1 siRNA (m): sc-60716, GPAA1 shRNA Plasmid (h): sc-60715-SH, GPAA1 shRNA Plasmid (m): sc-60716-SH, GPAA1 shRNA (h) Lentiviral Particles: sc-60715-V and GPAA1 shRNA (m) Lentiviral Particles: sc-60716-V.

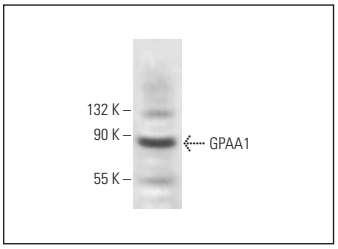
Molecular Weight of GPAA1: 70 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

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



GPAA1 (B-10): sc-514538. Western blot analysis of GPAA1 expression in K-562 whole cell lysate.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.