SANTA CRUZ BIOTECHNOLOGY, INC.

PGAP1 (T-14): sc-168934

BACKGROUND

PGAP1 (post-GPI attachment to proteins 1), also known as Bst1 or GPI inositol-deacylase, is a 922 amino acid multi-pass membrane protein that belongs to the GPI inositol-deacylase family and exists as 4 alternatively spliced isoforms. Encoded by a gene that maps to human chromosome 2q33.1, PGAP1 localizes to Endoplasmic reticulum membrane and is involved in inositol deacylation of glycosylphosphatidylinositol- (GPI) anchored proteins. GPI inositol deacylation may be vital for streamlined transport of GPI-anchored proteins from Endoplasmic reticulum to Golgi apparatus, as well as inducing mature GPI that are capable of protein attachment. Human and rat PGAP1 share 90% amino acid sequence identity and both contain an identical lipase consensus motif with a putative catalytic serine. PGAP1 is also linked to otocephaly and male infertility.

REFERENCES

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2. Maeda, Y., et al. 2006. CHO glycosylation mutants: GPI anchor. Meth. Enzymol. 416: 182-205.
3. Tashima, Y., et al. 2006. PGAP2 is essential for correct processing and stable expression of GPI-anchored proteins. Mol. Biol. Cell 17: 1410-1420.
4. Ueda, Y., et al. 2007. PGAP1 knock-out mice show otocephaly and male infertility. J. Biol. Chem. 282: 30373-30380.
5. Maeda, Y., et al. 2007. Fatty acid remodeling of GPI-anchored proteins is required for their raft association. Mol. Biol. Cell 18: 1497-1506.
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7. Urquhart, J., et al. 2009. 4.5 Mb microdeletion in chromosome band 2q33.1 associated with learning disability and cleft palate. Eur. J. Med. Genet. 52: 454-457.
8. Fujita, M., et al. 2010. Structural remodeling of GPI anchors during biosynthesis and after attachment to proteins. FEBS Lett. 584: 1670-1677.
9. Kamnasaran, D., et al. 2010. Prenatal diagnosis and molecular genetic studies on a new case of agnathia-otocephaly. Fetal Pediatr. Pathol. 29: 207-211.

CHROMOSOMAL LOCATION

Genetic locus: PGAP1 (human) mapping to 2q33.1; Pgap1 (mouse) mapping to 1 C1.1.

SOURCE

PGAP1 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PGAP1 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-168934 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PGAP1 (T-14) is recommended for detection of PGAP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PGAP1 (T-14) is also recommended for detection of PGAP1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PGAP1 siRNA (h): sc-94514, PGAP1 siRNA (m): sc-152185, PGAP1 shRNA Plasmid (h): sc-94514-SH, PGAP1 shRNA Plasmid (m): sc-152185-SH, PGAP1 shRNA (h) Lentiviral Particles: sc-94514-V and PGAP1 shRNA (m) Lentiviral Particles: sc-152185-V.

Molecular Weight of PGAP1 isoforms 1/2/3/4: 105/85/68/50 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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