SANTA CRUZ BIOTECHNOLOGY, INC.

GTPBP9 (E-12): sc-132703

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The Power to Question

BACKGROUND

GTP-binding protein 9 (GTPBP9), also known as Obg-like ATPase 1 (OLA1), is a 396 amino acid protein that belongs to the Obg-related GTPase family under the translation factors (TRAFAC) class. Originally thought to only have GTPase activity, Obg-related GTPase family members have been shown to also have ATPase activity. In *Homo sapiens,* GTPBP9 exhibits a preference for binding ATP over GTP, with GTP binding occuring only at high nucleotide concentration. One cause for ATP affinity and GTP discrimination is thought to be a substitution of glutamine for a hydrophobic amino acid in Obg-related family members; this is the same substitution that inactivates Ras-like GTPases. GTPBP9 contains a C-terminal TGS domain that binds to ligands and an N-terminal G domain which binds nucleotides. GTPBP9 is expressed as three isoforms produced by alternative splicing.

REFERENCES

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3. Caldon, C.E. and March, P.E. 2003. Function of the universally conserved bacterial GTPases. Curr. Opin. Microbiol. 6: 135-139.
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5. Brown, E.D. 2005. Conserved P-loop GTPases of unknown function in bacteria: an emerging and vital ensemble in bacterial physiology. Biochem. Cell Biol. 83: 738-746.
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CHROMOSOMAL LOCATION

Genetic locus: OLA1 (human) mapping to 2q31.1; Ola1 (mouse) mapping to 2 C3.

SOURCE

GTPBP9 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GTPBP9 of human origin.

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-132703 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GTPBP9 (E-12) is recommended for detection of GTPBP9 isoforms 1 and 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with GTBP9 isoform 2.

GTPBP9 (E-12) is also recommended for detection of GTPBP9 isoforms 1 and 3 in additional species, including bovine and avian.

Suitable for use as control antibody for GTPBP9 siRNA (h): sc-94782, GTPBP9 siRNA (m): sc-145833, GTPBP9 shRNA Plasmid (h): sc-94782-SH, GTPBP9 shRNA Plasmid (m): sc-145833-SH, GTPBP9 shRNA (h) Lentiviral Particles: sc-94782-V and GTPBP9 shRNA (m) Lentiviral Particles: sc-145833-V.

Molecular Weight of GTPBP9: 45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

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 or our catalog for detailed protocols and support products.