

# GTPBP9 (T-17): sc-101969

## 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 occurring 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

- Vetter, I.R. and Wittinghofer, A. 2001. The guanine nucleotide-binding switch in three dimensions. *Science* 294: 1299-1304.
- Leipe, D.D., Wolf, Y.I., Koonin, E.V. and Aravind, L. 2002. Classification and evolution of P-loop GTPases and related ATPases. *J. Mol. Biol.* 317: 41-72.

## CHROMOSOMAL LOCATION

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

## SOURCE

GTPBP9 (T-17) is a purified rabbit polyclonal antibody raised against GTPBP9 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

GTPBP9 (T-17) is recommended for detection of GTPBP9 of mouse, rat, human and dog 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), immunohistochemistry (including paraffin-embedded sections) (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 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.

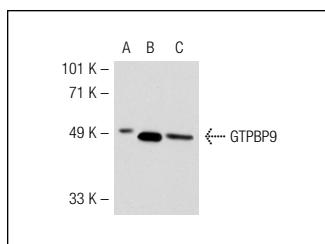
Molecular Weight of GTPBP9: 45 kDa.

Positive Controls: GTPBP9 (h): 293 Lysate: sc-113027, GTPBP9 (m2): 293T Lysate: sc-126929 or Hep G2 cell lysate: sc-2227.

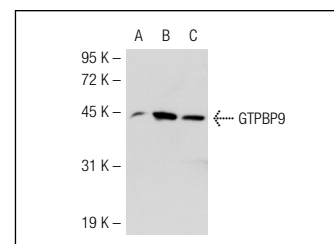
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



GTPBP9 (T-17): sc-101969. Western blot analysis of GTPBP9 expression in non-transfected 293T: sc-110760 (A), human GTPBP9 transfected 293T: sc-113027 (B) and Hep G2 (C) whole cell lysates.



GTPBP9 (T-17): sc-101969. Western blot analysis of GTPBP9 expression in non-transfected 293T: sc-117752 (A), mouse GTPBP9 transfected 293T: sc-126929 (B) and Hep G2 (C) whole cell lysates.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **GTPBP9 (G-6): sc-393946** or **GTPBP9 (F-10): sc-393231**, our highly recommended monoclonal alternatives to GTPBP9 (T-17).