

# GTPBP1 (TR-L4): sc-134354

## BACKGROUND

The gene encoding GTPBP1 (GTP-binding protein 1), a 669 amino acid cytoplasmic protein, is highly conserved among species with 97% sequence similarity between the human and mouse homologs. While mainly expressed in smooth muscle, brain, thymus, kidney and lung, expression of GTPBP1 in monocytes can be induced by IFN- $\gamma$ , a finding which is similar with other members of the G protein superfamily. The primary structure of GTPBP1 seems to indicate that it is related to EF-1  $\alpha$  and EF-Tu, G proteins that are important components of protein synthesis machinery. Since mutation of the gene encoding GTPBP1 does not lead to any phenotypic abnormalities, it is thought that there may be a genetic redundancy to make up for GTPBP1 lack-of-function. GTPBP2 shares 44% sequence similarity with GTPBP1 and also overlaps in expression pattern, suggesting that the GTPBP2 gene may compensate for GTPBP1 genetic abnormalities.

## REFERENCES

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- Senju, S. and Nishimura, Y. 1997. Identification of human and mouse GP-1, a putative member of a novel G-protein family. *Biochem. Biophys. Res. Commun.* 231: 360-364.
- Kudo, H., et al. 2000. Mouse and human GTPBP2, newly identified members of the GP-1 family of GTPase. *Biochem. Biophys. Res. Commun.* 272: 456-465.
- Watanabe, M., et al. 2000. Cloning, expression analysis, and chromosomal mapping of GTPBP2, a novel member of the G protein family. *Gene* 256: 51-58.
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## CHROMOSOMAL LOCATION

Genetic locus: GTPBP1 (human) mapping to 22q13.1; Gtpbp1 (mouse) mapping to 15 E1.

## SOURCE

GTPBP1 (TR-L4) is a mouse monoclonal antibody raised against recombinant GTPBP1 protein of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

GTPBP1 (TR-L4) is recommended for detection of GTPBP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GTPBP1 siRNA (h): sc-75213, GTPBP1 siRNA (m): sc-145825, GTPBP1 shRNA Plasmid (h): sc-75213-SH, GTPBP1 shRNA Plasmid (m): sc-145825-SH, GTPBP1 shRNA (h) Lentiviral Particles: sc-75213-V and GTPBP1 shRNA (m) Lentiviral Particles: sc-145825-V.

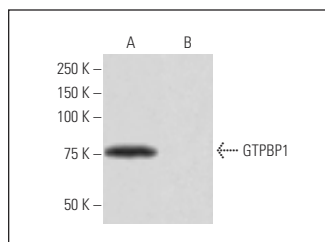
Molecular Weight of GTPBP1: 72 kDa.

Positive Controls: human GTPBP1 transfected 293T whole cell lysate.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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.

## DATA



GTPBP1 (TR-L4): sc-134354. Western blot analysis of GTPBP1 expression in human GTPBP1 transfected (A) and non-transfected (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Wang, R., et al. 2019. Ginsenoside metabolite compound-K regulates macrophage function through inhibition of  $\beta$ -Arrestin-2. *Biomed. Pharmacother.* 115: 108909.

## 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) for detailed protocols and support products.