

# GTPBP2 (T-13): sc-137514

## BACKGROUND

Small G proteins act as molecular switches for regulation of variety of cellular processes, such as nuclear transport, signal transduction, membrane trafficking and protein synthesis. GTPBP2 (GTP-binding protein 2) is a 602 amino acid G protein that is expressed in kidney, skeletal muscle, testis, brain and thymus, though it is not detected in liver. Expression of GTPBP2 is enhanced by  $\gamma$ -interferon stimulation in HeLa cells, THP-1 cells and thioglycollate-elicited mouse peritoneal macrophages. There are four isoforms of GTPBP2 that are expressed as a result of alternative splicing events. 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

1. 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.
2. 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.
3. Senju, S., et al. 2000. Immunocytochemical analyses and targeted gene disruption of GTPBP1. *Mol. Cell. Biol.* 20: 6195-6200.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607434. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Mungall, A.J., et al. 2003. The DNA sequence and analysis of human chromosome 6. *Nature* 425: 805-811.
6. Mulholland, P.J., et al. 2006. Genomic profiling identifies discrete deletions associated with translocations in glioblastoma multiforme. *Cell Cycle* 5: 783-791.

## CHROMOSOMAL LOCATION

Genetic locus: GTPBP2 (human) mapping to 6p21.1.

## SOURCE

GTPBP2 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GTPBP2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137514 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

GTPBP2 (T-13) is recommended for detection of GTPBP2 of 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)], 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 other GTPBP family members.

GTPBP2 (T-13) is also recommended for detection of GTPBP2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GTPBP2 siRNA (h): sc-95104, GTPBP2 shRNA Plasmid (h): sc-95104-SH and GTPBP2 shRNA (h) Lentiviral Particles: sc-95104-V.

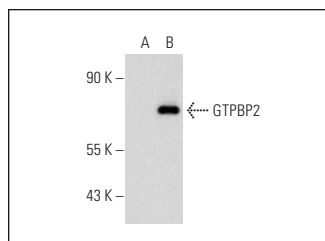
Molecular Weight of GTPBP2 isoforms 1/2/3/4: 66/57/27/65 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or GTPBP2 (h): 293T Lysate: sc-117110.

## 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.

## DATA



GTPBP2 (T-13): sc-137514. Western blot analysis of GTPBP2 expression in non-transfected: sc-117752 (A) and human GTPBP2 transfected: sc-117110 (B) 293T whole cell lysates.

## 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.