

# TBKBP1 (E-12): sc-109466

## BACKGROUND

TBKBP1 (TBK1 binding protein 1), also known as SINTBAD, is a 615 amino acid adaptor protein that binds to TBK1 (TANK binding kinase) and IKK- $\epsilon$  (inhibitor of  $\kappa$  light polypeptide gene enhancer in B cells, kinase  $\epsilon$ ). Involved in innate antiviral immunity and the TNF $\alpha$ /NF $\kappa$ B pathway, TBKBP1 exists as a ubiquitously expressed homodimer found at highest levels in ovary. Lower levels of TBKBP1 are found in brain, testis, lung, heart, kidney, liver and smooth muscle. TBKBP1 exists as two alternatively spliced isoforms that are encoded by a gene that maps to human chromosome 17q21.32. Chromosome 17 comprises over 2.5% of the human genome and encodes over 1,200 genes, including two key tumor suppressor genes, p53 and BRCA1. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome.

## REFERENCES

- Hupp, T.R., Meek, D.W., Midgley, C.A. and Lane, D.P. 1992. Regulation of the specific DNA binding function of p53. *Cell* 71: 875-886.
- Futreal, P.A., Liu, Q., Shattuck-Eidens, D., Cochran, C., Harshman, K., Tavtigian, S., Bennett, L.M., Haugen-Strano, A., Swensen, J. and Miki, Y. 1994. BRCA1 mutations in primary breast and ovarian carcinomas. *Science* 266: 120-122.
- Nagase, T., Ishikawa, K., Suyama, M., Kikuno, R., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 1998. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. *DNA Res.* 5: 277-286.
- Bouwmeester, T., Bauch, A., Ruffner, H., Angrand, P.O., Bergamini, G., Croughton, K., Cruciat, C., Eberhard, D., Gagneur, J., Ghidelli, S., Hopf, C., Huhse, B., Mangano, R., Michon, A.M., Schirle, M., Schlegl, J., Schwab, M., Stein, M.A., Bauer, A., Casari, G., et al. 2004. A physical and functional map of the human TNF $\alpha$ /NF $\kappa$ B signal transduction pathway. *Nat. Cell Biol.* 6: 97-105.
- Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608476. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Ryzhakov, G. and Radow, F. 2007. SINTBAD, a novel component of innate antiviral immunity, shares a TBK1-binding domain with NAP1 and TANK. *EMBO J.* 26: 3180-3190.
- Mirzayans, R., Andrais, B., Scott, A., Paterson, M.C. and Murray, D. 2010. Single-cell analysis of p16<sup>INK4a</sup> and p21<sup>WAF1</sup> expression suggests distinct mechanisms of senescence in normal human and Li-Fraumeni syndrome fibroblasts. *J. Cell. Physiol.* 223: 57-67.

## CHROMOSOMAL LOCATION

Genetic locus: TBKBP1 (human) mapping to 17q21.32; Tbkbp1 (mouse) mapping to 11 D.

## SOURCE

TBKBP1 (E-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of TBKBP1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109466 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TBKBP1 (E-12) is recommended for detection of TBKBP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TBKBP1 (E-12) is also recommended for detection of TBKBP1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for TBKBP1 siRNA (h): sc-94070, TBKBP1 siRNA (m): sc-154119, TBKBP1 shRNA Plasmid (h): sc-94070-SH, TBKBP1 shRNA Plasmid (m): sc-154119-SH, TBKBP1 shRNA (h) Lentiviral Particles: sc-94070-V and TBKBP1 shRNA (m) Lentiviral Particles: sc-154119-V.

Molecular Weight of TBKBP1: 68 kDa.

## 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.

## 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.