

JKTBP (G-24): sc-133699

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to mRNA transcription and pre-mRNA processing, as well as mature mRNA transport to the cytoplasm and translation. There are approximately 20 known hnRNP proteins, and their complexes are the major constituents of the spliceosome. The majority of hnRNP protein components are localized to the nucleus, however some shuttle between the nucleus and the cytoplasm. JKTBP (JKT41-binding protein), also known as HNRPDL (heterogeneous nuclear ribonucleoprotein D-like), is a 420 amino acid hnRNP that shuttles between the nucleus and the cytoplasm and contains 2 RRM (RNA recognition motif) domains. Expressed in a variety of tissues, including liver, brain, lung, placenta, kidney, spleen, testis, thymus, ovary and skeletal muscle, JKTBP functions as a transcriptional regulator that binds to both single- and double-stranded DNA and is capable of both enhancing and repressing transcriptional activity. Multiple isoforms of JKTBP exist due to alternative splicing events.

REFERENCES

- Doi, A., et al. 1998. Molecular cloning of the cDNA encoding A+U-rich element RNA binding factor. *Biochim. Biophys. Acta* 1396: 51-56.
- Tsuchiya, N., et al. 1998. Cloning and characterization of a cDNA encoding a novel heterogeneous nuclear ribonucleoprotein-like protein and its expression in myeloid leukemia cells. *J. Biochem.* 123: 499-507.
- Kamei, D., et al. 1999. Two forms of expression and genomic structure of the human heterogeneous nuclear ribonucleoprotein D-like JKTBP gene (HNRPDL). *Gene* 228: 13-22.
- Kawamura, H., et al. 2002. Identification of the nucleocytoplasmic shuttling sequence of heterogeneous nuclear ribonucleoprotein D-like protein JKTBP and its interaction with mRNA. *J. Biol. Chem.* 277: 2732-2739.
- Boopathi, E., et al. 2004. Regulation of murine cytochrome c oxidase Vb gene expression during myogenesis: YY-1 and heterogeneous nuclear ribonucleoprotein D-like protein (JKTBP1) reciprocally regulate transcription activity by physical interaction with the BERF-1/ZBP-89 factor. *J. Biol. Chem.* 279: 35242-35254.
- Reboll, M.R., et al. 2007. NRF IRES activity is mediated by RNA binding protein JKTBP1 and a 14 nt RNA element. *RNA* 13: 1328-1340.
- Wu, Y.Y., et al. 2008. Overexpression of JKTBP1 induces androgen-independent LNCaP cell proliferation through activation of epidermal growth factor-receptor (EGF-R). *Cell Biochem. Funct.* 26: 467-477.

CHROMOSOMAL LOCATION

Genetic locus: HNRPDL (human) mapping to 4q21.22; Hnrpdl (mouse) mapping to 5 E4.

SOURCE

JKTBP (G-24) is a Protein A purified rabbit polyclonal antibody raised against synthetic JKTBP peptide 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

JKTBP (G-24) is recommended for detection of JKTBP of mouse, human and canine 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for JKTBP siRNA (h): sc-105584, JKTBP siRNA (m): sc-105585, JKTBP shRNA Plasmid (h): sc-105584-SH, JKTBP shRNA Plasmid (m): sc-105585-SH, JKTBP shRNA (h) Lentiviral Particles: sc-105584-V and JKTBP shRNA (m) Lentiviral Particles: sc-105585-V.

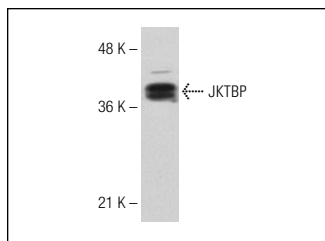
Molecular Weight of JKTBP isoforms: 53/38 kDa.

Positive Controls: Daudi cell lysate: sc-2415.

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).

DATA



JKTBP (G-24): sc-133699. Western blot analysis of JKTBP expression in Daudi whole cell lysate.

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.