SANTA CRUZ BIOTECHNOLOGY, INC.

hnRNP K (P-20): sc-16554

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. They also bind heterogeneous nuclear RNA (hnRNA), which are the transcripts produced by RNA Polymerase II. There are approximately 20 known hnRNP proteins and their complexes are the major constituents of the spliceosome. The majority of hnRNP protein are localized to the nucleus, however some shuttle between the nucleus and the cytoplasm, such as hnRNP K. hnRNP K recruits a variety of molecular partners through two K homologous (KH) domains, which are required for protein-protein interactions. hnRNP K also contains several potential phosphorylation sites, including Ser 302, the major site of PKCd phosphorylation, which are thought to regulate various cellular functions, including sequence-specific DNA binding, transcription, RNA binding and nucleocytoplasmic shuttling.

CHROMOSOMAL LOCATION

Genetic locus: HNRNPK (human) mapping to 9q21.32; Hnrnpk (mouse) mapping to 13 B1.

SOURCE

hnRNP K (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of hnRNP K of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16554 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

hnRNP K (P-20) is recommended for detection of hnRNP K of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

hnRNP K (P-20) is also recommended for detection of hnRNP K in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for hnRNP K siRNA (h): sc-38282, hnRNP K siRNA (m): sc-38283, hnRNP K shRNA Plasmid (h): sc-38282-SH, hnRNP K shRNA Plasmid (m): sc-38283-SH, hnRNP K shRNA (h) Lentiviral Particles: sc-38282-V and hnRNP K shRNA (m) Lentiviral Particles: sc-38283-V.

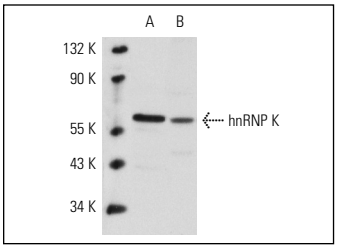
Molecular Weight of hnRNP K: 65 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, KNRK nuclear extract: sc-2141 or HeLa whole cell lysate: sc-2200.

STORAGE

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

DATA



hnRNP K (P-20): sc-16554. Western blot analysis of hnRNP K expression in HeLa (**A**) and KNRK (**B**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Zhang, S., et al. 2004. DNA-dependent protein kinase (DNA-PK) phosphorylates nuclear DNA helicase II/RNA helicase A and hnRNP proteins in an RNA-dependent manner. Nucleic Acids Res. 32: 1-10.
2. Thyagarajan, A., et al. 2004. Phylogenetically conserved binding of specific K homology domain proteins to the 3'-untranslated region of the vertebrate middle neurofilament mRNA. J. Biol. Chem. 279: 49680-49688.
3. Rautajoki, K.J., et al. 2007. Interleukin-4 inhibits caspase-3 by regulating several proteins in the FAS pathway during initial stages of human T helper 2 cell differentiation. Mol. Cell. Proteomics 6: 238-251.
4. Emerald, B.S., et al. 2007. αCP1 mediates stabilization of hTERT mRNA by autocrine human growth hormone. J. Biol. Chem. 282: 680-690.
5. Shi, L., et al. 2008. Loss of androgen receptor in aging and oxidative stress through Myb protooncoprotein-regulated reciprocal chromatin dynamics of p53 and poly(ADP-ribose) polymerase PARP-1. J. Biol. Chem. 283: 36474-36485.
6. Barboro, P., et al. 2009. Proteomic analysis of the nuclear matrix in the early stages of rat liver carcinogenesis: identification of differentially expressed and MAR-binding proteins. Exp. Cell Res. 315: 226-239.
7. Subramaniam, K., et al. 2010. Transcriptional down-regulation of IGFBP-3 in human hepatocellular carcinoma cells is mediated by the binding of TIA-1 to its AT-rich element in the 3'-untranslated region. Cancer Lett. 297: 259-268.

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.