SANTA CRUZ BIOTECHNOLOGY, INC.

p-hnRNP K (H-5): sc-365998

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of poly-peptides that contribute to mRNA transcription, pre-mRNA processing and 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 components 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 PKC δ phosphorylation, which are thought to regulate various cellular functions, including sequence-specific DNA binding, transcription, RNA binding and nucleocytoplasmic shuttling.

REFERENCES

1. Siomi, H., et al. 1993. The pre-mRNA binding K protein contains a novel evolutionarily conserved motif. Nucleic Acids Res. 21: 1193-1198.
2. Badolato, J., et al. 1995. Identification and characterisation of a novel human RNA-binding protein. Gene 166: 323-337.
3. Siomi, H. and Dreyfuss, G. 1995. A nuclear localization domain in the hnRNP A1 protein. J. Cell Biol. 129: 551-560.

CHROMOSOMAL LOCATION

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

SOURCE

p-hnRNP K (H-5) is a mouse monoclonal antibody specific for a short amino acid sequence containing Ser 302 phosphorylated hnRNP K of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-hnRNP K (H-5) is available conjugated to agarose (sc-365998 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365998 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365998 PE), fluorescein (sc-365998 FITC), Alexa Fluor® 488 (sc-365998 AF488), Alexa Fluor® 546 (sc-365998 AF546), Alexa Fluor® 594 (sc-365998 AF594) or Alexa Fluor® 647 (sc-365998 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365998 AF680) or Alexa Fluor® 790 (sc-365998 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365998 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

p-hnRNP K (H-5) is recommended for detection of Ser 302 phosphorylated hnRNP K of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

p-hnRNP K (H-5) is also recommended for detection of correspondingly phosphorylated hnRNP K in additional species, including equine, canine, bovine, porcine and avian.

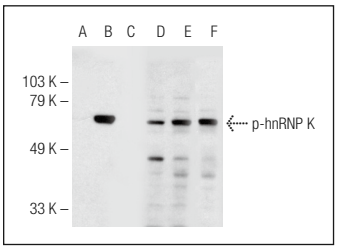
Suitable for use as control antibody for hnRNP K siRNA (h): sc-38282, hnRNP K siRNA (m): sc-38283, hnRNP K shRNA Plasmid (h): sc-38282-SH, hnRNP K shRNA Plasmid (m): sc-38283-SH, hnRNP K shRNA (h) Lentiviral Particles: sc-38282-V and hnRNP K shRNA (m) Lentiviral Particles: sc-38283-V.

Molecular Weight of p-hnRNP K: 65 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Western blot analysis of hnRNP K phosphorylation in untreated (**A**,**D**), PMA treated (**B**,**E**) and PMA and lambda protein phosphatase (sc-200312A) treated (**C**,**F**) THP-1 whole cell lysates. Antibodies tested include p-hnRNP K (H-5): sc-365998 (**A**,**B**,**C**) and hnRNP K (H-300): sc-25373 (**D**,**E**,**F**).

RESEARCH USE

For research use only, not for use in diagnostic procedures.