SANTA CRUZ BIOTECHNOLOGY, INC.

hnRNP K (D-6): sc-28380

The Power to Question

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to mRNA transcription, 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 proteins and their complexes are the major constituents of the spliceosome. The majority of hnRNP proteins 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.

CHROMOSOMAL LOCATION

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

SOURCE

hnRNP K (D-6) is a mouse monoclonal antibody raised against amino acids 1-300 of hnRNP K of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

hnRNP K (D-6) is available conjugated to agarose (sc-28380 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28380 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28380 PE), fluorescein (sc-28380 FITC), Alexa Fluor® 488 (sc-28380 AF488), Alexa Fluor® 546 (sc-28380 AF546), Alexa Fluor® 594 (sc-28380 AF594) or Alexa Fluor® 647 (sc-28380 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28380 AF680) or Alexa Fluor® 790 (sc-28380 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

hnRNP K (D-6) is recommended for detection of hnRNP K of mouse, rat and human origin by Western Blotting (starting dilution 1:5000, dilution range 1:5000-1:100000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

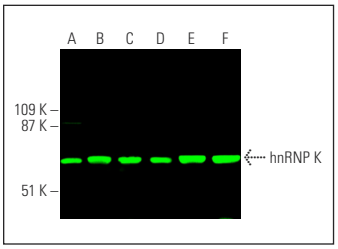
Molecular Weight of hnRNP K: 65 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or L8 cell lysate: sc-3807.

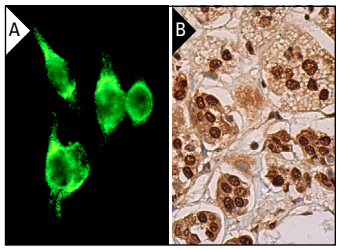
STORAGE

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

DATA



hnRNP K (D-6): sc-28380. Near-infrared western blot analysis of hnRNP K expression in HeLa (**A**), KNRK (**B**), NIH/3T3 (**C**), LADMAC (**D**), L8 (**E**) and RPE-J (**F**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



hnRNP K (D-6): sc-28380. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing nuclear and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Majerciak, V., et al. 2006. Structural and functional analyses of Kaposi sarcoma-associated herpesvirus ORF57 nuclear localization signals in living cells. J. Biol. Chem. 281: 28365-28378.
2. Moujaber, O., et al. 2016. Dissecting the molecular mechanisms that impair stress granule formation in aging cells. Biochim. Biophys. Acta 1864: 475-486.
3. Hwang, C.K., et al. 2017. Phosphorylation of poly(rC) binding protein 1 (PCBP1) contributes to stabilization of mu opioid receptor (MOR) mRNA via interaction with AU-rich element RNA-binding protein 1 (AUF1) and poly A binding protein (PABP). Gene 598: 113-130.
4. Martínez-Pizarro, A., et al. 2018. Intronic PAH gene mutations cause a splicing defect by a novel mechanism involving U1snRNP binding downstream of the 5' splice site. PLoS Genet. 14: e1007360.
5. Xu, H., et al. 2019. Novel replisome-associated proteins at cellular replication forks in EBV-transformed B lymphocytes. PLoS Pathog. 15: e1008228.
6. Cai, Z., et al. 2020. RIC-seq for global *in situ* profiling of RNA-RNA spatial interactions. Nature 582: 432-437.
7. Lehman, B.J., et al. 2021. Dynamic regulation of CTCF stability and sub-nuclear localization in response to stress. PLoS Genet. 17: e1009277.
8. Lan, C., et al. 2022. The alternative splicing of intersectin 1 regulated by PTBP1 promotes human glioma progression. Cell Death Dis. 13: 835.

RESEARCH USE

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

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