SANTA CRUZ BIOTECHNOLOGY, INC.

# hnRNP L (4D11): sc-32317

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides 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 proteins components are localized to the nucleus; however some shuttle between the nucleus and the cytoplasm. hnRNP I, also designated polypyrimidine tract-binding protein (PTB) and its homolog hnRNP L bind to the 3' end of introns to modulate alternative splicing mechanisms of pre-mRNAs in normal cells and the translation of several viruses, including hepatitis C virus (HCV). The human hnRNP I gene encodes a protein that is localized in the nucleoplasm. hnRNP L, like hnRNP I, is also localized in the nucleoplasm.

## CHROMOSOMAL LOCATION

Genetic locus: HNRPL (human) mapping to 19q13.2; Hnrpl (mouse) mapping to 7 A3.

## SOURCE

hnRNP L (4D11) is a mouse monoclonal antibody raised against hnRNP proteins from HeLa cells purified by affinity chromatography on ssDNA agarose 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.

hnRNP L (4D11) is available conjugated to agarose (sc-32317 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-32317 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32317 PE), fluorescein (sc-32317 FITC), Alexa Fluor® 488 (sc-32317 AF488), Alexa Fluor® 546 (sc-32317 AF546), Alexa Fluor® 594 (sc-32317 AF594) or Alexa Fluor® 647 (sc-32317 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32317 AF680) or Alexa Fluor® 790 (sc-32317 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

hnRNP L (4D11) is recommended for detection of hnRNP L 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for hnRNP L siRNA (h): sc-38284, hnRNP L siRNA (m): sc-38285, hnRNP L shRNA Plasmid (h): sc-38284-SH, hnRNP L shRNA Plasmid (m): sc-38285-SH, hnRNP L shRNA (h) Lentiviral Particles: sc-38284-V and hnRNP L shRNA (m) Lentiviral Particles: sc-38285-V.

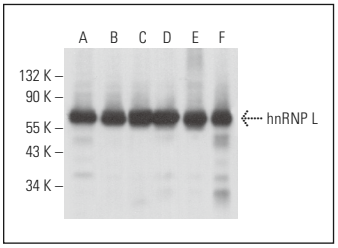
Molecular Weight of hnRNP L: 68 kDa.

Positive Controls: MEG-01 cell lysate: sc-2283, NIH/3T3 nuclear extract: sc-2138 or HeLa nuclear extract: sc-2120.

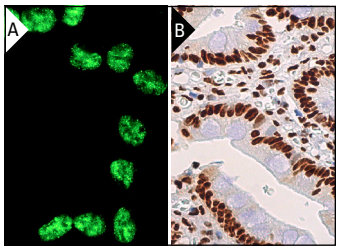
## STORAGE

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

## DATA




hnRNP L (4D11): sc-32317. Western blot analysis of hnRNP L expression in MEG-01 (**A**), RAW 264.7 (**B**), MCF7 (**C**) and Hep G2 (**D**) whole cell lysates and HeLa (**E**) and NIH/3T3 (**F**) nuclear extracts.




hnRNP L (4D11): sc-32317. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing nuclear staining of glandular cells (**B**).

## SELECT PRODUCT CITATIONS


1. Ma, S., et al. 2007. Relocalization of the polypyrimidine tract-binding protein during PKA-induced neurite growth. Biochim. Biophys. Acta 1773: 912-923.
2. Wilhelmi, I., et al. 2016. Sec16 alternative splicing dynamically controls COPII transport efficiency. Nat. Commun. 7: 12347.
3. PreUBner, M., et al. 2017. Body temperature cycles control rhythmic alternative splicing in mammals. Mol. Cell 67: 433-446.e4.
4. DeBoer, J., et al. 2018. Proteomic profiling of HIV-infected T-cells by SWATH mass spectrometry. Virology 516: 246-257.
5. Xu, L., et al. 2019. Inclusion of hnRNP L alternative exon 7 is associated with good prognosis and inhibited by oncogene SRSF3 in head and neck squamous cell carcinoma. Biomed Res. Int. 2019: 9612425.
6. Meinke, S., et al. 2020. Srsf10 and the minor spliceosome control tissue-specific and dynamic SR protein expression. Elife 9: e56075.
7. Yin, M., et al. 2021. HNRNPA2B1 as a trigger of RNA switch modulates the miRNA-mediated regulation of CDK6. iScience 24: 103345.
8. Li, G., et al. 2022. The USP18-FBXO6 axis maintains the malignancy of ovarian cancer. Biochem. Biophys. Res. Commun. 593: 101-107.
9. Malnar Črnigoj, M., et al. 2023. Phenylalanine-tRNA aminoacylation is compromised by ALS/FTD-associated C9orf72 C4G2 repeat RNA. Nat. Commun. 14: 5764.
10. Zhang, X., et al. 2024. Multivalent GU-rich oligonucleotides sequester TDP-43 in the nucleus by inducing high molecular weight RNP complexes. iScience 27: 110109.


## RESEARCH USE

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