SANTA CRUZ BIOTECHNOLOGY, INC.

HELIC2 (B-11): sc-393517

BACKGROUND

HELIC2, also known as SNRNP200 (small nuclear ribonucleoprotein 200 kDa (U5)), ASCC3L1 or BRR2, is a 2,136 amino acid protein that localizes to the nucleus and contains two SEC63 domains, two helicase C-terminal domains and two helicase ATP-binding domains. Existing as multiple alternatively spliced isoforms, HELIC2 functions as an RNA helicase that is thought to promote specific RNA-RNA conformational changes which are important in the second step of RNA splicing. The gene encoding HELIC2 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the chromosome 2-localized ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes, which also map to chromosome 2.

REFERENCES

1. Lauber, J., et al. 1996. The HeLa 200 kDa U5 snRNP-specific protein and its homologue in *Saccharomyces cerevisiae* are members of the DEXH-box protein family of putative RNA helicases. EMBO J. 15: 4001-4015.
2. Achsel, T., et al. 1998. The human U5-220kD protein (hPrp8) forms a stable RNA-free complex with several U5-specific proteins, including an RNA unwindase, a homologue of ribosomal elongation factor EF-2, and a novel WD-40 protein. Mol. Cell. Biol. 18: 6756-6766.
3. Meister, G., et al. 2001. SMNrp is an essential pre-mRNA splicing factor required for the formation of the mature spliceosome. EMBO J. 20: 2304-2314.
4. Zhou, Z., et al. 2002. Comprehensive proteomic analysis of the human spliceosome. Nature 419: 182-185.
5. Jurica, M.S., et al. 2002. Purification and characterization of native spliceosomes suitable for three-dimensional structural analysis. RNA 8: 426-439.
6. Peng, R., et al. 2002. PSF and p54^{nrb} bind a conserved stem in U5 snRNA. RNA 8: 1334-1347.
7. Will, C.L., et al. 2004. The human 18S U11/U12 snRNP contains a set of novel proteins not found in the U2-dependent spliceosome. RNA 10: 929-941.
8. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 601664. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: SNRNP200 (human) mapping to 2q11.2; Snrnp200 (mouse) mapping to 2 F1.

SOURCE

HELIC2 (B-11) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of HELIC2 of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

HELIC2 (B-11) is recommended for detection of HELIC2 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).

HELIC2 (B-11) is also recommended for detection of HELIC2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for HELIC2 siRNA (h): sc-75243, HELIC2 siRNA (m): sc-75244, HELIC2 shRNA Plasmid (h): sc-75243-SH, HELIC2 shRNA Plasmid (m): sc-75244-SH, HELIC2 shRNA (h) Lentiviral Particles: sc-75243-V and HELIC2 shRNA (m) Lentiviral Particles: sc-75244-V.

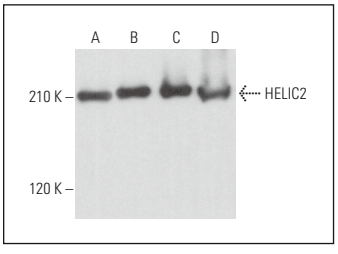
Molecular Weight of HELIC2: 200 kDa.

Positive Controls: NAMALWA cell lysate: sc-2234, ALL-SIL whole cell lysate: sc-364356 or MM-142 cell lysate: sc-2246.

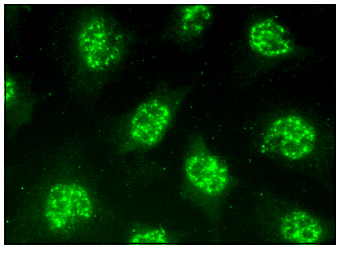
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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



HELIC2 (B-11): sc-393517. Western blot analysis of HELIC2 expression in NAMALWA (**A**), ALL-SIL (**B**) and MM-142 (**C**) whole cell lysates and WEHI-231 nuclear extract (**D**).



HELIC2 (B-11): sc-393517. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

STORAGE

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