# SANTA CRUZ BIOTECHNOLOGY, INC.

# HELIC2 (G-9): sc-393170



## 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.
- 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.
- Jurica, M.S., et al. 2002. Purification and characterization of native spliceosomes suitable for three-dimensional structural analysis. RNA 8: 426-439.

#### **CHROMOSOMAL LOCATION**

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

#### SOURCE

HELIC2 (G-9) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of HELIC2 of human origin.

# PRODUCT

Each vial contains 200  $\mu g$  IgG\_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HELIC2 (G-9) is available conjugated to agarose (sc-393170 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393170 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393170 PE), fluorescein (sc-393170 FITC), Alexa Fluor<sup>®</sup> 488 (sc-393170 AF488), Alexa Fluor<sup>®</sup> 546 (sc-393170 AF546), Alexa Fluor<sup>®</sup> 594 (sc-393170 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-393170 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-393170 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-393170 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## **APPLICATIONS**

HELIC2 (G-9) 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  $\mu$ g per 100-500  $\mu$ g 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).

HELIC2 (G-9) 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: Jurkat nuclear extract: sc-2132, BJAB nuclear extract: sc-2145 or HeLa nuclear extract: sc-2120.

#### DATA





HELIC2 (G-9): sc-393170. Western blot analysis of HELIC2 expression in Jurkat (A), BJAB (B) and HeLa (C) nuclear extracts and RAW 264.7 whole cell lysate (D).

HELIC2 (G-9): sc-393170. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts.

#### SELECT PRODUCT CITATIONS

 Jin, L., et al. 2020. STRAP regulates alternative splicing fidelity during lineage commitment of mouse embryonic stem cells. Nat. Commun. 11: 5941.

# **STORAGE**

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## **RESEARCH USE**

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

## **PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

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