SANTA CRUZ BIOTECHNOLOGY, INC.

HRC (P-13): sc-138025

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HRC (histidine rich calcium binding protein), also known as sarcoplasmic reticulum histidine-rich calcium-binding protein or HCP, is a 699 amino acid that binds low-density lipoprotein with high affinity. As a high capacity calcium binding protein, HRC regulates the sequestration and release of calcium in the lumen of the junctional sarcoplasmic reticulum (SR) of cardiac, skeletal and smooth muscle. This mechanism may involve direct interaction between HRC and the cytoplasmic domain of Triadin, an integral membrane protein of the SR. The gene encoding HRC maps to human chromosome 19q13.33 and mouse chromosome 7 B4.

REFERENCES

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2. Hofmann, S.L., et al. 1991. cDNA and genomic cloning of HRC, a human sarcoplasmic reticulum protein, and localization of the gene to human chromosome 19 and mouse chromosome 7. Genomics 9: 656-669.
3. Brown, S.D., et al. 1993. Mapping the Hrc gene to proximal mouse chromosome 7: delineation of a conserved linkage group with human 19q. Genomics 18: 459-461.
4. Sacchetto, R., et al. 2001. Ca^{2+}-dependent interaction of triadin with histidine-rich Ca^{2+}-binding protein carboxyl-terminal region. Biochem. Biophys. Res. Commun. 289: 1125-1134.
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6. Kim, E., et al. 2003. Increased Ca^{2+} storage capacity in the sarcoplasmic reticulum by overexpression of HRC (histidine-rich Ca^{2+} binding protein). Biochem. Biophys. Res. Commun. 300: 192-196.
7. Anderson, J.P., et al. 2004. HRC is a direct transcriptional target of MEF-2 during cardiac, skeletal, and arterial smooth muscle development *in vivo.* Mol. Cell. Biol. 24: 3757-3768.
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CHROMOSOMAL LOCATION

Genetic locus: Hrc (mouse) mapping to 7 B4.

SOURCE

HRC (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HRC of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138025 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HRC (P-13) is recommended for detection of HRC of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for HRC siRNA (m): sc-146079, HRC shRNA Plasmid (m): sc-146079-SH and HRC shRNA (m) Lentiviral Particles: sc-146079-V.

Molecular Weight (predicted) of HRC: 80 kDa.

Molecular Weight (observed) of HRC: 99 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO 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 or our catalog for detailed protocols and support products.