SANTA CRUZ BIOTECHNOLOGY, INC.

CIRP (1C9): sc-293325

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The Power to Question

BACKGROUND

CIRP, also known as CIRBP (cold inducible RNA binding protein) or A18HNRNP, is a 172 amino acid protein that localizes to the nucleus and contains one RRM (RNA recognition motif) domain. Expressed ubiquitously, CIRP is thought to play an essential role in the suppression of cellular proliferation in response to UV irradiation or extreme cold. Human CIRP, which may be involved in the pathogenesis of endometrial carcinoma, shares 95% sequence identity with its mouse counterpart, suggesting a conserved role between species. The gene encoding CIRP maps to human chromosome 19, which is the genetic home for a number of immunoglobulin superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family, and Fc receptors (FcRs).

REFERENCES

1. Nishiyama, H., et al. 1997. Cloning and characterization of human CIRP (cold-inducible RNA-binding protein) cDNA and chromosomal assignment of the gene. Gene 204: 115-120.
2. Sheikh, M.S., et al. 1997. Identification of several human homologs of hamster DNA damage-inducible transcripts. Cloning and characterization of a novel UV-inducible cDNA that codes for a putative RNA-binding protein. J. Biol. Chem. 272: 26720-26726.
3. Nishiyama, H., et al. 1997. A glycine-rich RNA-binding protein mediating cold-inducible suppression of mammalian cell growth. J. Cell Biol. 137: 899-908.
4. Nishiyama, H., et al. 1998. Decreased expression of cold-inducible RNA-binding protein (CIRP) in male germ cells at elevated temperature. Am. J. Pathol. 152: 289-296.
5. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602649. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Fujita, J. 1999. Cold shock response in mammalian cells. J. Mol. Microbiol. Biotechnol. 1: 243-255.
7. Hamid, A.A., et al. 2003. Expression of cold-inducible RNA-binding protein in the normal endometrium, endometrial hyperplasia, and endometrial carcinoma. Int. J. Gynecol. Pathol. 22: 240-247.

CHROMOSOMAL LOCATION

Genetic locus: CIRBP (human) mapping to 19p13.3; Cirbp (mouse) mapping to 10 C1.

SOURCE

CIRP (1C9) is a mouse monoclonal antibody raised against amino acids 1-90 of CIRP of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CIRP (1C9) is recommended for detection of CIRP 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), 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 CIRP siRNA (h): sc-97329, CIRP siRNA (m): sc-142348, CIRP shRNA Plasmid (h): sc-97329-SH, CIRP shRNA Plasmid (m): sc-142348-SH, CIRP shRNA (h) Lentiviral Particles: sc-97329-V and CIRP shRNA (m) Lentiviral Particles: sc-142348-V.

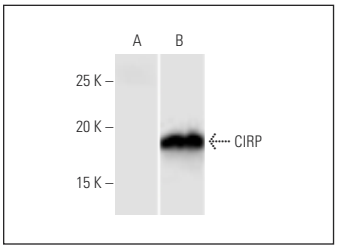
Molecular Weight of CIRP: 18 kDa.

Positive Controls: CIRP transfected 293T whole cell lysate.

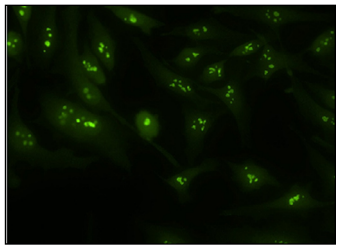
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CIRP (1C9): sc-293325. Western blot analysis of CIRP expression in non-transfected (**A**) and CIRP transfected (**B**) 293T whole cell lysates.



CIRP (1C9): sc-293325. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and nucleolar localization.

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.