

CRP1 (F-12): sc-390418



The Power to Question

BACKGROUND

Cysteine-rich proteins (CRPs) participate in the organization of multiprotein complexes, both in the cytoplasm, where they participate in cytoskeletal remodeling, and in the nucleus, where they facilitate smooth muscle differentiation. CRP1 (cysteine and glycine-rich protein 1), also known as CRP, CSRP1 or CYRP, is abundant in the prostate and smooth muscle lineages. It contains two LIM zinc-binding domains and is localized in the nucleus. The LIM domains of CRP1 are critical for binding to the adhesion-plaque protein Zyxin. CRP1 also interacts with α -actinin to mediate muscle differentiation. These associations indicate that the main function of CRP1 may be structural.

REFERENCES

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- Pomies, P., et al. 1997. CRP1, a LIM domain protein implicated in muscle differentiation, interacts with α -actinin. *J. Cell Biol.* 139: 157-168.
- Dube, J.Y., et al. 1998. Abundant cysteine-rich protein-1 is localized in the stromal compartment of the human prostate. *Arch. Androl.* 40: 109-115.
- Schmeichel, K.L., et al. 1998. LIM domains of cysteine-rich protein 1 (CRP1) are essential for its zyxin-binding function. *Biochem. J.* 331: 885-892.
- Erdel, M., et al. 1998. Assignment1 of CSRP1 encoding the LIM domain protein CRP1, to human chromosome 1q32 by fluorescence *in situ* hybridization. *Cytogenet. Cell Genet.* 83: 10-11.
- Henderson, J.R., et al. 1999. The LIM protein, CRP1, is a smooth muscle marker. *Dev. Dyn.* 214: 229-238.
- Chang, D.F., et al. 2003. Cysteine-rich LIM-only proteins CRP1 and CRP2 are potent smooth muscle differentiation cofactors. *Dev. Cell* 4: 107-118.

CHROMOSOMAL LOCATION

Genetic locus: CSRP1 (human) mapping to 1q32.1; *Csrp1* (mouse) mapping to 1 E4.

SOURCE

CRP1 (F-12) is a mouse monoclonal antibody raised against amino acids 8-96 mapping near the N-terminus of CRP1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CRP1 (F-12) is available conjugated to agarose (sc-390418 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390418 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390418 PE), fluorescein (sc-390418 FITC), Alexa Fluor[®] 488 (sc-390418 AF488), Alexa Fluor[®] 546 (sc-390418 AF546), Alexa Fluor[®] 594 (sc-390418 AF594) or Alexa Fluor[®] 647 (sc-390418 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390418 AF680) or Alexa Fluor[®] 790 (sc-390418 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CRP1 (F-12) is recommended for detection of CRP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for CRP1 siRNA (h): sc-45367, CRP1 siRNA (m): sc-45368, CRP1 shRNA Plasmid (h): sc-45367-SH, CRP1 shRNA Plasmid (m): sc-45368-SH, CRP1 shRNA (h) Lentiviral Particles: sc-45367-V and CRP1 shRNA (m) Lentiviral Particles: sc-45368-V.

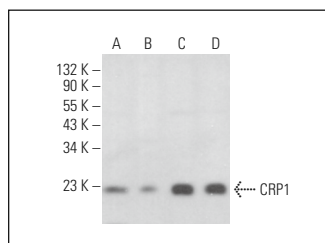
Molecular Weight of CRP1: 23 kDa.

Positive Controls: DU 145 cell lysate: sc-2268, PC-3 cell lysate: sc-2220 or JAR cell lysate: sc-2276.

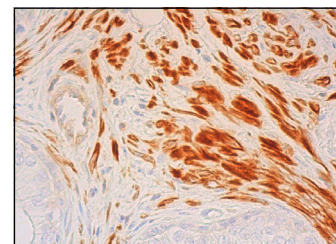
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CRP1 (F-12): sc-390418. Western blot analysis of CRP1 expression in DU 145 (A), PC-3 (B), JAR (C) and Neuro-2A (D) whole cell lysates.



CRP1 (F-12): sc-390418. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing nuclear and cytoplasmic staining of smooth muscle cells.

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.