

# ICAP-1 (B-2): sc-166217

## BACKGROUND

ICAP-1 (integrin  $\beta$ 1-binding protein 1, integrin cytoplasmic domain-associated protein 1) is a 200 amino acid protein encoded by the human gene ITGB1BP1. Integrins are transmembrane heterodimeric receptors for extracellular matrix and cell surface proteins. The binding of integrins to ligands in the extracellular matrix is linked to cell attachment and spreading, which in turn activates various cytosolic signal cascades to promote cell migration, survival, proliferation and differentiation. ICAP-1 interacts with the cytoplasmic domain of Integrin  $\beta$ 1 (ITGB1) to facilitate the recruitment of Integrin  $\beta$ 1 to the focal contacts during integrin-dependent cell adhesion. ICAP-1 is a cytoplasmic protein that is primarily expressed in intestine, colon, testis, ovary, thymus, spleen and prostate.

## REFERENCES

1. Chang, D.D., et al. 1997. ICAP-1, a novel  $\beta$ 1 integrin cytoplasmic domain-associated protein, binds to a conserved and functionally important NPXY sequence motif of  $\beta$ 1 integrin. *J. Cell Biol.* 138: 1149-1157.
2. Zhang, J., et al. 2001. Interaction between KRIT1 and ICAP-1 $\alpha$  infers perturbation of integrin  $\beta$ 1-mediated angiogenesis in the pathogenesis of cerebral cavernous malformation. *Hum. Mol. Genet.* 10: 2953-2960.
3. Chang, D.D., et al. 2002. Molecular basis for interaction between ICAP-1  $\alpha$  PTB domain and  $\beta$ 1 integrin. *J. Biol. Chem.* 277: 8140-8145.
4. Calderwood, D.A., et al. 2003. Integrin  $\beta$  cytoplasmic domain interactions with phosphotyrosine-binding domains: a structural prototype for diversity in integrin signaling. *Proc. Natl. Acad. Sci. USA* 100: 2272-2277.
5. Hillman, R.T., et al. 2004. An unappreciated role for RNA surveillance. *Genome Biol.* 5: R8.

## CHROMOSOMAL LOCATION

Genetic locus: ITGB1BP1 (human) mapping to 2p25.1; Itgb1bp1 (mouse) mapping to 12 A1.2.

## SOURCE

ICAP-1 (B-2) is a mouse monoclonal antibody raised against amino acids 1-200 representing full length ICAP-1 of human origin.

## PRODUCT

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

ICAP-1 (B-2) is available conjugated to agarose (sc-166217 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166217 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166217 PE), fluorescein (sc-166217 FITC), Alexa Fluor<sup>®</sup> 488 (sc-166217 AF488), Alexa Fluor<sup>®</sup> 546 (sc-166217 AF546), Alexa Fluor<sup>®</sup> 594 (sc-166217 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-166217 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-166217 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-166217 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

ICAP-1 (B-2) is recommended for detection of ICAP-1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ICAP-1 siRNA (h): sc-62485, ICAP-1 siRNA (m): sc-62486, ICAP-1 shRNA Plasmid (h): sc-62485-SH, ICAP-1 shRNA Plasmid (m): sc-62486-SH, ICAP-1 shRNA (h) Lentiviral Particles: sc-62485-V and ICAP-1 shRNA (m) Lentiviral Particles: sc-62486-V.

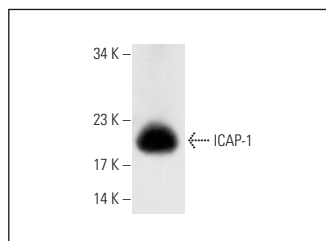
Molecular Weight of ICAP-1: 22 kDa.

Positive Controls: rat small intestine extract: sc-364811 or mouse brain extract: sc-2253.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



ICAP-1 (B-2): sc-166217. Western blot analysis of ICAP-1 expression in rat small intestine tissue extract.

## 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](http://www.scbt.com) for detailed protocols and support products.