SANTA CRUZ BIOTECHNOLOGY, INC.

ICAP-1 (A-20): sc-67914

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ICAP-1 (integrin β1-binding protein 1, integrin cytoplasmic domain-associated protein 1) is a 200 amino acid protein encoded by the human gene ITGB1BP. 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 β1 (ITGB1) to facilitate the recruitment of integrin β1 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 β1 integrin cytoplasmic domain-associated protein, binds to a conserved and functionally important NPXY sequence motif of β1 integrin. J. Cell Biol. 138: 1149-1157.
2. Zhang, J., et al. 2001. Interaction between krit1 and ICAP1α infers perturbation of integrin β1-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 ICAP1 α PTB domain and β1 integrin. J. Biol. Chem. 277: 8140-8145.
4. Calderwood, D.A., et al. 2003. Integrin β 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.
6. Zawistowski, J.S., et al. 2005. CCM1 and CCM2 protein interactions in cell signaling: implications for cerebral cavernous malformations pathogenesis. Hum. Mol. Genet. 14: 2521-2531.

CHROMOSOMAL LOCATION

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

SOURCE

ICAP-1 (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ICAP-1 of human 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-67914 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ICAP-1 (A-20) is recommended for detection of ICAP-1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ICAP-1 (A-20) is also recommended for detection of ICAP-1 in additional species, including equine, canine, bovine and porcine.

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.

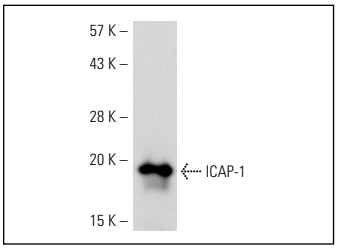
Molecular Weight of ICAP-1: 22 kDa.

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

RECOMMENDED 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



ICAP-1 (A-20): sc-67914. Western blot analysis of ICAP-1 expression in rat small intestine tissue extract.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **ICAP-1 (B-2): sc-166217**, our highly recommended monoclonal alternative to ICAP-1 (A-20).