

# CAP (G-3): sc-166903

## BACKGROUND

c-Cbl associated protein (CAP), also designated ponsin and SH3P12, interacts with c-Cbl and facilitates the tyrosine phosphorylation of c-Cbl in response to Insulin. CAP contains three adjacent Src homology-3 (SH3) domains in the carboxy terminus. It interacts with the focal adhesion kinase p125FAK and co-localizes with Actin stress fibers. CAP is expressed in 3T3-L1 adipocytes, but not in 3T3-L1 or NIH/3T3 fibroblasts. Expression of the CAP gene is stimulated by thiazolidinediones (TZDs) through activation of PPAR $\gamma$ . In addition to its interaction with c-Cbl, CAP interacts with Sos through the same SH3 domain, and may facilitate protein-protein associations involved in cell structural changes.

## REFERENCES

1. Ribon, V., et al. 1998. A novel, multifunctional c-Cbl binding protein in Insulin receptor signaling in 2T3-L1 adipocytes. *Mol. Cell. Biol.* 18: 872-879.
2. Ribon, V., et al. 1998. A role for CAP, a novel, multifunctional Src homology 3 domain-containing protein in formation of Actin stress fibers and focal adhesions. *J. Biol. Chem.* 273: 4073-4080.
3. Ribon, V., et al. 1998. Thiazolidinediones and Insulin resistance: peroxisome proliferator-activated receptor  $\gamma$  activation stimulates expression of the CAP gene. *Proc. Natl. Acad. Sci. USA* 95: 14751-14756.
4. Kurakin, A., et al. 1998. Molecular recognition properties of the C-terminal SH3 domain of the Cbl associated protein, Cap. *J. Pept. Res.* 52: 331-337.
5. Baumann, C.A., et al. 2000. Cloning and characterization of a functional peroxisome proliferator activator receptor- $\gamma$ -responsive element in the promoter of the CAP gene. *J. Biol. Chem.* 275: 9131-9135.

## CHROMOSOMAL LOCATION

Genetic locus: Sorbs1 (mouse) mapping to 19 C3.

## SOURCE

CAP (G-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1184-1200 near the C-terminus of CAP of mouse origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-166903 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

CAP (G-3) is recommended for detection of CAP of mouse and rat 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 CAP siRNA (m): sc-40340, CAP shRNA Plasmid (m): sc-40340-SH and CAP shRNA (m) Lentiviral Particles: sc-40340-V.

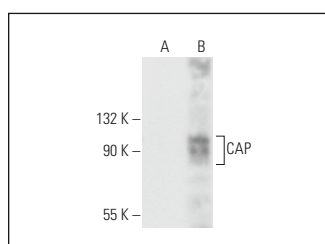
Molecular Weight of CAP: 143 kDa.

Positive Controls: CAP (m): 293T Lysate: sc-118986.

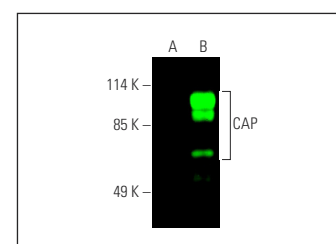
## RECOMMENDED SUPPORT REAGENTS

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™ 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CAP (G-3): sc-166903. Western blot analysis of CAP expression in non-transfected: sc-117752 (A) and mouse CAP transfected: sc-118986 (B) 293T whole cell lysates.



CAP (G-3): sc-166903. Near-infrared western blot analysis of CAP expression in non-transfected: sc-117752 (A) and mouse CAP transfected: sc-118986 (B) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG $\kappa$  BP-CFL 680: sc-516180.

## SELECT PRODUCT CITATIONS

1. Tsiligkrou, I.A., et al. 2015. Oxytalan-positive peripheral ossifying fibromas express runt-related transcription factor 2, bone morphogenetic protein-2, and cementum attachment protein. An immunohistochemical study. *J. Oral Pathol. Med.* 44: 628-633.
2. Sekine, Y., et al. 2024. STAP-2 facilitates Insulin signaling through binding to CAP/c-Cbl and regulates adipocyte differentiation. *Sci. Rep.* 14: 5799.

## RESEARCH USE

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