

# CAP2 (H-45): sc-134636

## BACKGROUND

Cyclase-associated proteins (CAPs) are a family of evolutionary conserved proteins that participate in signal transduction and function to regulate events associated with the Actin cytoskeleton. CAP1 and CAP2 (adenylate cyclase-associated protein 1 and 2, respectively) are two members of the CAP family, both of which localize to the cell membrane and contain one C-CAP/cofactor C-like domain. CAP1 is involved in the regulation of Actin filaments and is thought to mediate processes such as establishment of cell polarity and mRNA localization, while CAP2 has a bifunctional regulatory role and can interact directly with Actin. Although CAP1 is expressed throughout the body, CAP2 is predominately expressed in skin, brain, heart and skeletal muscle. Over-expression of CAP2 is associated with hepatocellular carcinoma, suggesting a possible role for CAP2 in carcinogenesis.

## REFERENCES

1. Matviw, H., et al. 1992. Identification of a human cDNA encoding a protein that is structurally and functionally related to the yeast adenylyl cyclase-associated CAP proteins. *Mol. Cell. Biol.* 12: 5033-5040.
2. Yu, G., et al. 1994. Comparison of human CAP and CAP2, homologs of the yeast adenylyl cyclase-associated proteins. *J. Cell Sci.* 107: 1671-1678.
3. Hubberstey, A., et al. 1996. Mammalian CAP interacts with CAP, CAP2 and Actin. *J. Cell. Biochem.* 61: 459-466.
4. Moriyama, K. and Yahara, I. 2002. Human CAP1 is a key factor in the recycling of Cofilin and Actin for rapid Actin turnover. *J. Cell Sci.* 115: 1591-1601.
5. Bertling, E., et al. 2004. Cyclase-associated protein 1 (CAP1) promotes Cofilin-induced Actin dynamics in mammalian nonmuscle cells. *Mol. Biol. Cell* 15: 2324-2334.

## CHROMOSOMAL LOCATION

Genetic locus: CAP2 (human) mapping to 6p22.3; Cap2 (mouse) mapping to 13 A5.

## SOURCE

CAP2 (H-45) is a rabbit polyclonal antibody raised against amino acids 77-121 mapping near the N-terminus of CAP2 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.

## 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) or our catalog for detailed protocols and support products.

## APPLICATIONS

CAP2 (H-45) is recommended for detection of CAP2 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).

CAP2 (H-45) is also recommended for detection of CAP2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for CAP2 siRNA (h): sc-95443, CAP2 siRNA (m): sc-142002, CAP2 shRNA Plasmid (h): sc-95443-SH, CAP2 shRNA Plasmid (m): sc-142002-SH, CAP2 shRNA (h) Lentiviral Particles: sc-95443-V and CAP2 shRNA (m) Lentiviral Particles: sc-142002-V.

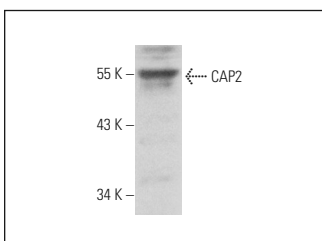
Molecular Weight of CAP2: 53 kDa.

Positive Controls: C32 whole cell lysate: sc-2205 or THP-1 cell lysate: sc-2238.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



CAP2 (H-45): sc-134636. Western blot analysis of CAP2 expression in THP-1 whole cell lysate.

## RESEARCH USE

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

**MONOS**  
Satisfaction  
Guaranteed

Try **CAP2 (A-5): sc-377471** or **CAP2 (NN12): sc-100916**, our highly recommended monoclonal alternatives to CAP2 (H-45).