SANTA CRUZ BIOTECHNOLOGY, INC.

CapG (H-85): sc-66823

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Caldesmon, filamin 1, nebulin, plastin, ADF, gelsolin, CapG, dematin and Cofilin are differentially expressed actin binding proteins. Both muscular (CDh) and non-muscular (CDl) forms of caldesmon bind to actin as well as to calmodulin and myosin. CDh is expressed predominantly on thin filaments in smooth muscle, whereas CDl is widely expressed in non-muscle tissues and cells. CapG, also designated actin-regulatory protein and macrophage capping protein, is a macrophage-specific protein that reversibly blocks the barbed ends of actin filaments but does not sever preformed ones. The interactions of CapG with actin may be important in the regulation of nuclear and cytoplasmic structures. CapG is a calcium-sensitive DNA-binding protein that plays a role in macrophage function. It is expressed in macrophages and macrophage-like cells and can localize both to the nucleus and the cytoplasm.

REFERENCES

1. Dabiri, G.A., et al. 1992. Molecular cloning of human macrophage capping protein cDNA. A unique member of the gelsolin/villin family expressed primarily in macrophages. J. Biol. Chem. 267: 16545-16552.
2. Mishra, V.S., et al. 1994. The human actin-regulatory protein CapG: gene structure and chromosome location. Genomics 23: 560-565.

CHROMOSOMAL LOCATION

Genetic locus: CAPG (human) mapping to 2p11.2; Capg (mouse) mapping to 6 C1.

SOURCE

CapG (H-85) is a rabbit polyclonal antibody raised against amino acids 256-340 mapping at the C-terminus of CapG 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.

APPLICATIONS

CapG (H-85) is recommended for detection of CapG 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).

CapG (H-85) is also recommended for detection of CapG in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CapG siRNA (h): sc-44920, CapG siRNA (m): sc-44921, CapG shRNA Plasmid (h): sc-44920-SH, CapG shRNA Plasmid (m): sc-44921-SH, CapG shRNA (h) Lentiviral Particles: sc-44920-V and CapG shRNA (m) Lentiviral Particles: sc-44921-V.

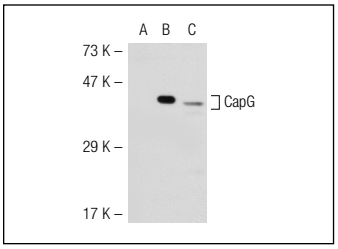
Molecular Weight of CapG: 39 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, CapG (m4): 293T Lysate: sc-118990 or U-937 cell lysate: sc-2239.

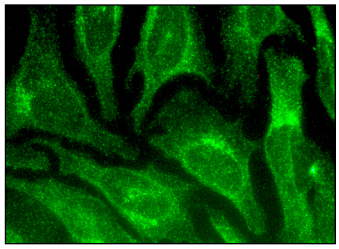
RECOMMENDED SECONDARY REAGENTS

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



CapG (H-85): sc-66823. Western blot analysis of CapG expression in non-transfected 293T: sc-117752 (**A**), mouse CapG transfected 293T: sc-118990 (**B**) and HL-60 (**C**) whole cell lysates.



CapG (H-85): sc-66823. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

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 or our catalog for detailed protocols and support products.