

CapG (N-20): sc-33082

BACKGROUND

Caldesmon, Filamin 1, nebulin, plastin, ADF, gelsolin, CapG, dematin and cofilin are differentially expressed actin binding proteins. Both muscular (CDh) and non-muscular (CDI) forms of Caldesmon bind to actin as well as to Calmodulin and Myosin. CDh is expressed predominantly on thin filaments in smooth muscle, whereas CDI 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

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2. Mishra, V.S., et al. 1994. The human actin-regulatory protein CapG: gene structure and chromosome location. *Genomics* 23: 560-565.
3. Southwick, F.S., et al. 1995. Gain-of-function mutations conferring actin-severing activity to human macrophage CapG. *J. Biol. Chem.* 270: 45-48.
4. Pellieux, C., et al. 2003. CapG, a gelsolin family protein modulating protective effects of unidirectional shear stress. *J. Biol. Chem.* 278: 29136-29144.
5. De Corte, V., et al. 2004. Increased importin- β -dependent nuclear import of the actin modulating protein CapG promotes cell invasion. *J. Cell Sci.* 117: 5283-5292.
6. Watari, A., et al. 2006. Suppression of tumorigenicity, but not anchorage independence, of human cancer cells by new candidate tumor suppressor gene CapG. *Oncogene*. 25: 7373-7380.

CHROMOSOMAL LOCATION

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

SOURCE

CapG (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CapG of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33082 P, (100 μ g 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

CapG (N-20) 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), 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 (N-20) 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: 43 kDa.

Positive Controls: U-937 cell lysate: sc-2239, HL-60 whole cell lysate: sc-2209 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 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) 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.

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.