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CapG (h): 293T Lysate: sc-170174

BACKGROUND

Caldesmon, Filamin 1, Nebulin, Plastin, ADF, Gelsolin, CapG, Dematin and Cofilin are differentially expressed Actin-binding proteins. Both muscular (CDh) and non-muscular (CD1) forms of Caldesmon bind to Actin as well as to calmodulin and myosin. CDh is expressed predominantly on thin filaments in smooth muscle, whereas CD1 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.
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.

CHROMOSOMAL LOCATION

Genetic locus: CAPG (human) mapping to 2p11.2.

PRODUCT

CapG (h): 293T Lysate represents a lysate of human CapG transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

CapG (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive CapG antibodies. Recommended use: 10-20 μ l per lane.

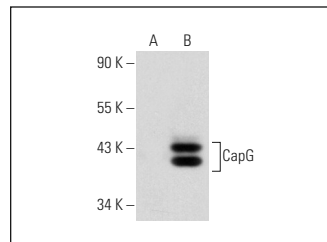
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CapG (H-9): sc-166428 is recommended as a positive control antibody for Western Blot analysis of enhanced human CapG expression in CapG transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



CapG (H-9): sc-166428. Western blot analysis of CapG expression in non-transfected: sc-117752 (A) and human CapG transfected: sc-170174 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.