

Caprin1 (G-10): sc-518252

BACKGROUND

Caprin1, also known as GPIAP1, GPIP137 or M11S1, is a 709 amino acid protein that localizes to the cytoplasm, as well as to the cytosol and the cell projection and belongs to the caprin family. Expressed ubiquitously as multiple alternatively spliced isoforms, Caprin1 is thought to regulate the transport and subsequent translation of mRNAs that encode proteins which are involved in synaptic plasticity and cellular proliferation. Caprin1 interacts directly with several proteins, including G3BP1, CaMKII α and BDNF and may function in homomultimeric structures. The gene encoding Caprin1 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

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7. Solomon, S., et al. 2007. Distinct structural features of caprin-1 mediate its interaction with G3BP-1 and its induction of phosphorylation of eukaryotic translation initiation factor 2 α , entry to cytoplasmic stress granules, and selective interaction with a subset of mRNAs. *Mol. Cell. Biol.* 27: 2324-2342.

CHROMOSOMAL LOCATION

Genetic locus: CAPRIN1 (human) mapping to 11p13.

SOURCE

Caprin1 (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 191-217 of Caprin1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Caprin1 (G-10) is recommended for detection of Caprin1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 Caprin1 siRNA (h): sc-72785, Caprin1 shRNA Plasmid (h): sc-72785-SH and Caprin1 shRNA (h) Lentiviral Particles: sc-72785-V.

Molecular Weight of Caprin1 monomer: 78 kDa.

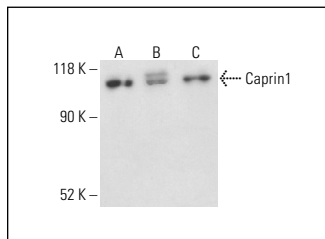
Molecular Weight of Caprin1 homodimer: 137 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, SJRH30 cell lysate: sc-2287 or HeLa whole cell lysate: sc-2200.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Caprin1 (G-10): sc-518252. Western blot analysis of Caprin1 expression in SH-SY5Y (A), HeLa (B) and SJRH30 (C) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

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 for detailed protocols and support products.