SANTA CRUZ BIOTECHNOLOGY, INC.

Caprin1 (F-3): sc-518251

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, CaMKIIα 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

1. Ellis, J.A. and Luzio, J.P. 1995. Identification and characterization of a novel protein (p137) which transcytoses bidirectionally in Caco-2 cells. J. Biol. Chem. 270: 20717-20723.
2. Gessler, M., et al. 1996. The gene encoding the GPI-anchored membrane protein p137GPI (M11S1) maps to human chromosome 11p13 and is highly conserved in the mouse. Genomics 32: 169-170.
3. de Vries, H., et al. 2000. Human pre-mRNA cleavage factor II_m contains homologs of yeast proteins and bridges two other cleavage factors. EMBO J. 19: 5895-5904.
4. Grill, B., et al. 2004. Activation/division of lymphocytes results in increased levels of cytoplasmic activation/proliferation-associated protein-1: prototype of a new family of proteins. J. Immunol. 172: 2389-2400.
5. Wang, B., et al. 2005. Absence of caprin-1 results in defects in cellular proliferation. J. Immunol. 175: 4274-4282.

CHROMOSOMAL LOCATION

Genetic locus: CAPRIN1 (human) mapping to 11p13; Caprin1 (mouse) mapping to 2 E2.

SOURCE

Caprin1 (F-3) 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 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Caprin1 (F-3) is available conjugated to agarose (sc-518251 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518251 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518251 PE), fluorescein (sc-518251 FITC), Alexa Fluor® 488 (sc-518251 AF488), Alexa Fluor® 546 (sc-518251 AF546), Alexa Fluor® 594 (sc-518251 AF594) or Alexa Fluor® 647 (sc-518251 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518251 AF680) or Alexa Fluor® 790 (sc-518251 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Caprin1 (F-3) is recommended for detection of Caprin1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Caprin1 siRNA (h): sc-72785, Caprin1 siRNA (m): sc-72786, Caprin1 shRNA Plasmid (h): sc-72785-SH, Caprin1 shRNA Plasmid (m): sc-72786-SH, Caprin1 shRNA (h) Lentiviral Particles: sc-72785-V and Caprin1 shRNA (m) Lentiviral Particles: sc-72786-V.

Molecular Weight of Caprin1 monomer: 78 kDa.

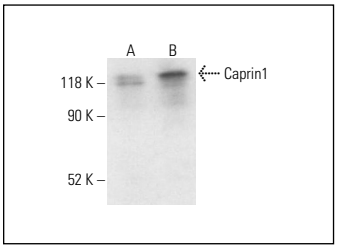
Molecular Weight of Caprin1 homodimerr: 137 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, mouse kidney extract: sc-2255 or HeLa whole cell lysate: sc-2200.

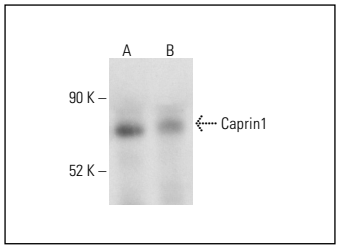
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 (F-3): sc-518251. Western blot analysis of Caprin1 expression in SH-SY5Y (**A**) and HeLa (**B**) whole cell lysates. Detection reagent used: m-IgG_{2b} BP-HRP: sc-542741.



Caprin1 (F-3): sc-518251. Western blot analysis of Caprin1 expression in mouse kidney (**A**) and mouse spleen (**B**) tissue extracts. Detection reagent used: m-IgG_{2b} BP-HRP: sc-542741.

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.