

NIPSNAP1/2 (F-4): sc-393201

BACKGROUND

The transient receptor potential (TRP) protein family consists of a diverse group of cation channels functioning in a variety of homeostatic and regulatory pathways. Four subfamilies exist, based on channel domain homology, not activating stimuli: C type (canonical or classical), V type (vanilloid receptor related), M type (melastatin related) and P type (PKD). NIPSNAP1 (4-nitrophenylphosphatase domain and non-neuronal SNAP25-like 1) is a 228 amino acid protein that abolishes TRPV6 currents, which facilitates calcium entry across the plasma membrane in pancreas, placenta, and to a lesser extent stomach and kidney tissue. TRPV6 membrane expression does not change in the presence of NIPSNAP1, which suggests that TRPV6 inhibition by NIPSNAP1 is independently regulated from reduced cell surface channel expression. NIPSNAP2, also known as GBAS (glioblastoma amplified sequence), is a 286 amino acid protein that is abundantly expressed in heart and skeletal muscle and may be involved in vesicular transport. NIPSNAP2 contains a signal peptide, a transmembrane domain and two tyrosine phosphorylation sites.

REFERENCES

1. Seroussi, E., et al. 1998. Characterization of the human NIPSNAP1 gene from 22q12: a member of a novel gene family. *Gene* 212: 13-20.
2. Lee, A.H., et al. 2002. Identification of a NIPSNAP homologue as host cell target for *Salmonella* virulence protein SpiC. *Cell. Microbiol.* 4: 739-750.
3. Buechler, C., et al. 2004. Expression pattern and raft association of NIPSNAP3 and NIPSNAP4, highly homologous proteins encoded by genes in close proximity to the ATP-binding cassette transporter A1. *Genomics* 83: 1116-1124.

CHROMOSOMAL LOCATION

Genetic locus: NIPSNAP1 (human) mapping to 22q12.2, GBAS (human) mapping to 7p11.2; Nipsnap1 (mouse) mapping to 11 A1, Gbas (mouse) mapping to 5 G1.3.

SOURCE

NIPSNAP1/2 (F-4) is a mouse monoclonal antibody raised against amino acids 197-284 mapping at the N-terminus of NIPSNAP1 of mouse origin.

PRODUCT

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

NIPSNAP1/2 (F-4) is available conjugated to agarose (sc-393201 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393201 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393201 PE), fluorescein (sc-393201 FITC), Alexa Fluor[®] 488 (sc-393201 AF488), Alexa Fluor[®] 546 (sc-393201 AF546), Alexa Fluor[®] 594 (sc-393201 AF594) or Alexa Fluor[®] 647 (sc-393201 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393201 AF680) or Alexa Fluor[®] 790 (sc-393201 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NIPSNAP1/2 (F-4) is recommended for detection of NIPSNAP1 and NIPSNAP2 of mouse and human origin, and the corresponding rat homologs 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NIPSNAP1/2 (F-4) is also recommended for detection of NIPSNAP1 and NIPSNAP2 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of NIPSNAP1: 34 kDa.

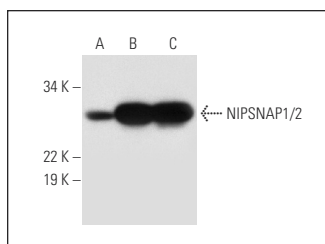
Molecular Weight of truncated NIPSNAP1 form: 29 kDa.

Positive Controls: rat liver extract: sc-2395, c4 whole cell lysate: sc-364186 or mouse liver extract: sc-2256.

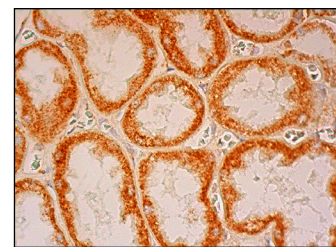
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



NIPSNAP1/2 (F-4): sc-393201. Western blot analysis of NIPSNAP1/2 expression in c4 whole cell lysate (A) and mouse liver (B) and rat liver (C) tissue extracts.



NIPSNAP1/2 (F-4): sc-393201. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

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.