

SNARK (E-8): sc-374283

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. SNARK (SNF1/AMP kinase-related kinase), also known as NUA2 (NUAK family, SNF1-like kinase, 2), is a 628 amino acid protein that contains one protein kinase domain and belongs to the Ser/Thr protein kinase family. Using magnesium as a cofactor, SNARK catalyzes the ATP-dependent phosphorylation of target proteins and is involved in regulating cell tolerance to stress-induced glucose starvation. Additionally, SNARK is thought to induce cell-cell detachment and may protect cells from Fap-1-mediated apoptosis, possibly playing a role in the motility and invasiveness of tumor cells.

REFERENCES

1. Lefebvre, D.L., et al. 2001. Identification and characterization of a novel sucrose-non-fermenting protein kinase/AMP-activated protein kinase-related protein kinase, SNARK. *Biochem. J.* 355: 297-305.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608131. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: NUA2 (human) mapping to 1q32.1.

SOURCE

SNARK (E-8) is a mouse monoclonal antibody raised against amino acids 501-628 mapping at the C-terminus of SNARK 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.

APPLICATIONS

SNARK (E-8) is recommended for detection of SNARK of 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 SNARK siRNA (h): sc-88608, SNARK shRNA Plasmid (h): sc-88608-SH and SNARK shRNA (h) Lentiviral Particles: sc-88608-V.

Molecular Weight of SNARK: 74 kDa.

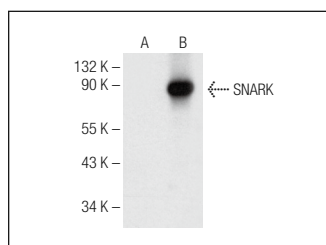
Positive Controls: SNARK (h): 293T Lysate: sc-129802, A-673 cell lysate: sc-2414 or HeLa whole cell lysate: sc-2200.

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



SNARK (E-8): sc-374283. Western blot analysis of SNARK expression in non-transfected: sc-117752 (A) and human SNARK transfected: sc-129802 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Picca, A., et al. 2019. Mitochondrial-derived vesicles as candidate biomarkers in Parkinson's disease: rationale, design and methods of the EXosomes in PARKinson disease (EXPAND) study. *Int. J. Mol. Sci.* 20: 2373.
2. Worrall Wilfred Raj, A.S., et al. 2024. NUAKs promote mTOR/c-Myc-induced glucose and glutamine reprogramming for cell growth and metastasis in breast cancer cells. *Biochim. Biophys. Acta Mol. Basis Dis.* 1871: 167508.

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.