

# SNRK (A-3): sc-398557

## BACKGROUND

The phosphorylation and dephosphorylation of proteins, catalysed by protein kinases and phosphatases, is the major mechanism for the transduction of intracellular signals in eukaryotic organisms. SNRK (SNF related kinase), also known as HSNFRK, is a 765 amino acid nuclear protein and a member of the sucrose nonfermenting (SNF)-related kinase family of serine/threonine kinases. Expressed in hematopoietic progenitor cells and leukemic cell lines, SNRK may play a role in hematopoietic cell proliferation or differentiation. Found at low levels in the testis and activated by LKB1, SNRK may be a regulator of low  $K^+$ -induced apoptosis of cerebellar granule neurons. The gene encoding SNRK maps to human chromosome 3p22.1, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

## REFERENCES

1. Becker, W., et al. 1996. Molecular cloning and characterization of a novel mammalian protein kinase harboring a homology domain that defines a subfamily of serine/threonine kinases. *Eur. J. Biochem.* 235: 736-743.
2. Yoshida, K., et al. 2000. SNRK, a member of the SNF1 family, is related to low  $K^+$ -induced apoptosis of cultured rat cerebellar granule neurons. *Brain Res.* 873: 274-282.
3. Kertesz, N., et al. 2002. Cloning and characterization of human and mouse SNRK sucrose non-fermenting protein (Snf-1)-related kinases. *Gene* 294: 13-24.
4. Jaleel, M., et al. 2005. Identification of the sucrose non-fermenting related kinase SNRK, as a novel LKB1 substrate. *FEBS Lett.* 579: 1417-1423.
5. Kameshita, I., et al. 2005. Expression cloning of a variety of novel protein kinases in *Lotus japonicus*. *J. Biochem.* 137: 33-39.

## CHROMOSOMAL LOCATION

Genetic locus: SNRK (human) mapping to 3p22.1; Snrk (mouse) mapping to 9 F4.

## SOURCE

SNRK (A-3) is a mouse monoclonal antibody raised against amino acids 335-448 mapping within an internal region of SNRK of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SNRK (A-3) is available conjugated to agarose (sc-398557 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398557 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398557 PE), fluorescein (sc-398557 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398557 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398557 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398557 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398557 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398557 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398557 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

SNRK (A-3) is recommended for detection of SNRK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 SNRK siRNA (h): sc-78359, SNRK siRNA (m): sc-153658, SNRK shRNA Plasmid (h): sc-78359-SH, SNRK shRNA Plasmid (m): sc-153658-SH, SNRK shRNA (h) Lentiviral Particles: sc-78359-V and SNRK shRNA (m) Lentiviral Particles: sc-153658-V.

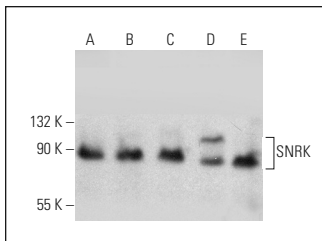
Molecular Weight of SNRK: 82 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HUV-EC-C whole cell lysate: sc-364180 or U-698-M whole cell lysate: sc-364799.

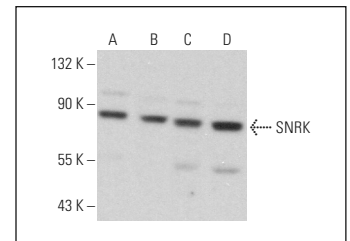
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



SNRK (A-3): sc-398557. Western blot analysis of SNRK expression in NCI-H1299 (A), U-251-MG (B), U-698-M (C), Neuro-2A (D) and RPE-J (E) whole cell lysates.



SNRK (A-3): sc-398557. Western blot analysis of SNRK expression in Jurkat nuclear extract (A) and HUV-EC-C (B), U-698-M (C) and NIH/3T3 (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Li, J., et al. 2019. Dysregulation of PP2A-Akt interaction contributes to sucrose non-fermenting related kinase (SNRK) deficiency induced Insulin resistance in adipose tissue. *Mol. Metab.* 28: 26-35.

## 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.