**BACKGROUND**

Nicotinamide adenine dinucleotide (NAD⁺) is an essential cofactor involved in fundamental processes in cell metabolism. NRK1 (nicotinamide riboside kinase 1), also known as Ribosylnicotinamide kinase 1, is a 199 amino acid enzyme involved in the synthesis of NAD⁺ through nicotinamide mononucleotide using nicotinamide riboside as the precursor. Nicotinamide riboside has been identified as a nutrient in milk, suggesting that it is a useful compound for elevating the NAD⁺ levels in humans. NRK1 also phosphorylates the anti-cancer drugs tiazofurin and 3-deazaguanosine, which converts them into toxic NAD⁺ analogs and leads to the inhibition of guanine nucleotide biosynthesis. There are two isoforms of NRK1 that are produced as a result of alternative splicing events.

**REFERENCES**


**CHROMOSOMATIC LOCATION**

Genetic locus: NMRK1 (human) mapping to 9q21.13; Nmrk1 (mouse) mapping to 19 B.

**SOURCE**

NRK1 (F-8) is a mouse monoclonal antibody raised against amino acids 38-77 mapping near the N-terminus of NRK1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG₂κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NRK1 (F-8) is available conjugated to agarose (sc-398852 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398852 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398852 PE), fluorescein (sc-398852 FITC), Alexa Fluor® 488 (sc-398852 AF488), Alexa Fluor® 546 (sc-398852 AF546), Alexa Fluor® 594 (sc-398852 AF594) or Alexa Fluor® 647 (sc-398852 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398852 AF680) or Alexa Fluor® 790 (sc-398852 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

NRK1 (F-8) is recommended for detection of NRK1 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 NRK1 siRNA (h): sc-92471, NRK1 siRNA (m): sc-150069, NRK1 shRNA Plasmid (h): sc-92471-SH, NRK1 shRNA Plasmid (m): sc-150069-SH, NRK1 shRNA (h) Lentiviral Particles: sc-92471-V and NRK1 shRNA (m) Lentiviral Particles: sc-150069-V.

Molecular Weight of NRK1: 23 kDa.

Positive Controls: NRK1 (m): 293T Lysate: sc-122131, PC-12 cell lysate: sc-2250 or TK-1 whole cell lysate: sc-364798.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:


**DATA**

**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.