

NAPRT (B-8): sc-398404

BACKGROUND

NAPRT (nicotinate phosphoribosyltransferase), also known as FHA-HIT-interacting protein or nicotinate phosphoribosyltransferase domain-containing protein 1, is a 538 amino acid member of the NAPRTase protein family. Localized to the cytoplasm, NAPRT is involved in the biosynthesis of the cofactor NAD⁺. NAPRT catalyzes the conversion of nicotinic acid (NA) to NA mononucleotide (NaMN). This conversion is essential to increase cellular NAD levels, which prevents oxidative stress of the cells. NAPRT is expressed as three isoforms produced by alternative splicing events. The gene that encodes NAPRT maps to human chromosome 8, which makes up nearly 146 million bases and encodes about 800 genes. Translocation of portions of chromosome 8 with amplifications of the c-Myc gene are found in some leukemias and lymphomas, and are typically associated with a poor prognosis. Portions of chromosome 8 have been linked to schizophrenia and bipolar disorder.

REFERENCES

- Wildenauer, D.B. and Schwab, S.G. 1999. Chromosomes 8 and 10 workshop. *Am. J. Med. Genet.* 88: 239-243.
- Magni, G., et al. 2004. Enzymology of NAD⁺ homeostasis in man. *Cell. Mol. Life Sci.* 61: 19-34.

CHROMOSOMAL LOCATION

Genetic locus: NAPRT (human) mapping to 8q24.3; Naprt (mouse) mapping to 15 D3.

SOURCE

NAPRT (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 141-162 within an internal region of NAPRT of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NAPRT (B-8) is available conjugated to agarose (sc-398404 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398404 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398404 PE), fluorescein (sc-398404 FITC), Alexa Fluor[®] 488 (sc-398404 AF488), Alexa Fluor[®] 546 (sc-398404 AF546), Alexa Fluor[®] 594 (sc-398404 AF594) or Alexa Fluor[®] 647 (sc-398404 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398404 AF680) or Alexa Fluor[®] 790 (sc-398404 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398404 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

NAPRT (B-8) is recommended for detection of NAPRT 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 NAPRT siRNA (h): sc-77596, NAPRT siRNA (m): sc-149829, NAPRT shRNA Plasmid (h): sc-77596-SH, NAPRT shRNA Plasmid (m): sc-149829-SH, NAPRT shRNA (h) Lentiviral Particles: sc-77596-V and NAPRT shRNA (m) Lentiviral Particles: sc-149829-V.

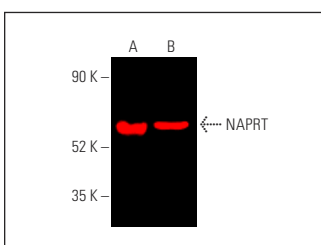
Molecular Weight of NAPRT: 58 kDa.

Positive Controls: human liver extract: sc-363766 or rat liver extract: sc-2395.

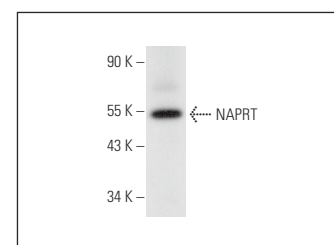
RECOMMENDED SUPPORT REAGENTS

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



NAPRT (B-8): sc-398404. Near-Infrared western blot analysis of NAPRT expression in rat liver (A) and human liver (B) tissue extracts. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2a} BP-CFL 790: sc-542740.



NAPRT (B-8): sc-398404. Western blot analysis of NAPRT expression in human liver tissue extract.

SELECT PRODUCT CITATIONS

- Ogino, Y., et al. 2018. Cross resistance to diverse anticancer nicotinamide phosphoribosyltransferase inhibitors induced by FK866 treatment. *Oncotarget* 9: 16451-16461.
- Mpilla, G.B., et al. 2021. PAK4-NAMPT dual inhibition sensitizes pancreatic neuroendocrine tumors to everolimus. *Mol. Cancer Ther.* 20: 1836-1845.

RESEARCH USE

For research use only, not for use in diagnostic procedures.