

Mina53 (H-4): sc-398521

BACKGROUND

Mina53, also known as MINA (Myc induced nuclear antigen), MDIG or N052, is a 465 amino acid protein that contains one JmjC domain and localizes to the nucleus. Expressed in placenta, liver, heart, pancreas and skeletal muscle, Mina53 is thought to be involved in ribosome biogenesis, specifically in the assembly of pre-ribosomal particles. Via its involvement in ribosome biogenesis, Mina53 may play an important role in cell growth and survival, as well as overall cellular proliferation events. Mina53 expression is upregulated in esophageal squamous cell carcinoma (ESCC), colon cancer and lung cancer tissues, suggesting that Mina53 may be involved in tumorigenesis. Multiple isoforms of Mina53 exist due to alternative splicing events.

REFERENCES

1. Tsuneoka, M., et al. 2002. A novel Myc target gene, Mina53, that is involved in cell proliferation. *J. Biol. Chem.* 277: 35450-35459.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 612049. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Teye, K., et al. 2004. Increased expression of a Myc target gene Mina53 in human colon cancer. *Am. J. Pathol.* 164: 205-216.
4. Tsuneoka, M., et al. 2004. Mina53 as a potential prognostic factor for esophageal squamous cell carcinoma. *Clin. Cancer Res.* 10: 7347-7356.
5. Eilbracht, J., et al. 2005. Protein N052—a constitutive nucleolar component sharing high sequence homologies to protein NO66. *Eur. J. Cell Biol.* 84: 279-294.
6. Zhang, Y., et al. 2005. The human mineral dust-induced gene, MDIG, is a cell growth regulating gene associated with lung cancer. *Oncogene* 24: 4873-4882.

CHROMOSOMAL LOCATION

Genetic locus: MINA (human) mapping to 3q11.2; Mina (mouse) mapping to 16 C1.3.

SOURCE

Mina53 (H-4) is a mouse monoclonal antibody raised against amino acids 110-165 mapping within an internal region of Mina53 of human 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.

Mina53 (H-4) is available conjugated to agarose (sc-398521 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398521 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398521 PE), fluorescein (sc-398521 FITC), Alexa Fluor® 488 (sc-398521 AF488), Alexa Fluor® 546 (sc-398521 AF546), Alexa Fluor® 594 (sc-398521 AF594) or Alexa Fluor® 647 (sc-398521 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398521 AF680) or Alexa Fluor® 790 (sc-398521 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Mina53 (H-4) is recommended for detection of Mina53 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 Mina53 siRNA (h): sc-75788, Mina53 siRNA (m): sc-75789, Mina53 shRNA Plasmid (h): sc-75788-SH, Mina53 shRNA Plasmid (m): sc-75789-SH, Mina53 shRNA (h) Lentiviral Particles: sc-75788-V and Mina53 shRNA (m) Lentiviral Particles: sc-75789-V.

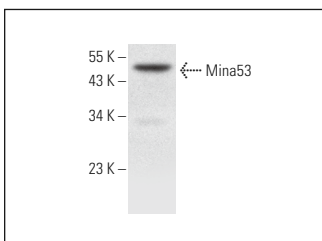
Molecular Weight of Mina53: 53 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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



Mina53 (H-4): sc-398521. Western blot analysis of Mina53 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Geng, F., et al. 2022. MDIG, a 2-oxoglutarate-dependent oxygenase, acts as an oncogene and predicts the prognosis of multiple types of cancer. *Int. J. Oncol.* 61: 82.

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.