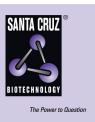
SANTA CRUZ BIOTECHNOLOGY, INC.

MRI1 (E-15): sc-240704



BACKGROUND

MRI1 (methylthioribose-1-phosphate isomerase), also known as MTR-1-P isomerase, is a 369 amino acid enzyme belonging to the eIF2B $\alpha/\beta/\delta$ subunit family. MRI1 is involved in the amino-acid biosynthesis pathway, specifically the L-methionine biosynthesis via salvage pathway. MRI1 catalyzes the interconversion of methylthioribose-1-phosphate (MTR-1-P) into methylthioribulose-1-phosphate (MTR-1-P) into methylthioribulose-1-phosphate (MTR-1-P). MRI1 is expressed as two isoforms produced by alternative splicing. The gene that encodes MRI1 maps to human chromosome 19, which consists of around 63 million bases with over 1,400 genes. Chromosome 19 is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin superfamily members including the killer cell and leukocyte lg-like receptors, a number of ICAMs, the CEACAM and PSG family, and Fc α receptors. Key genes for eye color and hair color also map to chromosome 19.

REFERENCES

- 1. Zimmermann, W., et al. 1988. Chromosomal localization of the carcinoembryonic antigen gene family and differential expression in various tumors. Cancer Res. 48: 2550-2554.
- LaPoint, S.F., et al. 2000. Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL). Adv. Anat. Pathol. 7: 307-321.
- 3. Trettel, F., et al. 2000. A fine physical map of the CACNA1A gene region on 19p13.1-p13.2 chromosome. Gene 241: 45-50.
- 4. Buchet-Poyau, K., et al. 2002. Search for the second Peutz-Jeghers syndrome locus: exclusion of the STK13, PRKCG, KLK10, and PSCD2 genes on chromosome 19 and the STK11IP gene on chromosome 2. Cytogenet. Genome Res. 97: 171-178.
- 5. Moodie, S.J., et al. 2002. Analysis of candidate genes on chromosome 19 in coeliac disease: an association study of the KIR and LILR gene clusters. Eur. J. Immunogenet. 29: 287-291.
- Bumann, M., et al. 2004. Crystal structure of yeast Ypr118w, a methylthioribose-1-phosphate isomerase related to regulatory eIF2B subunits. J. Biol. Chem. 279: 37087-37094.
- Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. Nature 428: 529-535.
- Parham, P. 2005. Immunogenetics of killer cell immunoglobulin-like receptors. Mol. Immunol. 42: 459-462.

CHROMOSOMAL LOCATION

Genetic locus: MRI1 (human) mapping to 19p13.2; Mri1 (mouse) mapping to 8 C3.

SOURCE

MRI1 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MRI1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-240704 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MRI1 (E-15) is recommended for detection of MRI1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

MRI1 (E-15) is also recommended for detection of MRI1 in additional species, including bovine and porcine.

Suitable for use as control antibody for MRI1 siRNA (h): sc-97714, MRI1 siRNA (m): sc-108742, MRI1 shRNA Plasmid (h): sc-97714-SH, MRI1 shRNA Plasmid (m): sc-108742-SH, MRI1 shRNA (h) Lentiviral Particles: sc-97714-V and MRI1 shRNA (m) Lentiviral Particles: sc-108742-V.

Molecular Weight of MRI1: 39 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.