

Mecr (G-12): sc-160510

BACKGROUND

Mecr (mitochondrial *trans*-2-enoyl-CoA reductase), also known as NRBF1 (nuclear receptor-binding factor 1), FASN2B or CGI-63, is a 373 amino acid mitochondrial protein that may play a role in fatty acid synthesis. Existing as two alternatively spliced isoforms, Mecr is highly expressed in cardiac and skeletal muscle, with lower levels found in pancreas, kidney, placenta and liver. Mecr forms a homodimer and belongs to the zinc-containing alcohol dehydrogenase family and quinone oxidoreductase subfamily. Mecr reduces *trans*-2-enoyl-CoA to acyl-CoA in an NADPH-dependent manner and is encoded by a gene that maps to human chromosome 1p35.3. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

1. Eudy, J.D., et al. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type II α . *Science* 280: 1753-1757.
2. Lau, E.K., et al. 1999. Two novel polymorphic sequences in the glucocerebrosidase gene region enhance mutational screening and founder effect studies of patients with Gaucher disease. *Hum. Genet.* 104: 293-300.
3. Miinalainen, I.J., et al. 2003. Characterization of 2-enoyl thioester reductase from mammals. An ortholog of YBR026p/MRF1'p of the yeast mitochondrial fatty acid synthesis type II. *J. Biol. Chem.* 278: 20154-20161.
4. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. *Eur. J. Hum. Genet.* 12: 365-371.
5. Oliveira, S.A., et al. 2005. Identification of risk and age-at-onset genes on chromosome 1p in Parkinson disease. *Am. J. Hum. Genet.* 77: 252-264.

CHROMOSOMAL LOCATION

Genetic locus: MECR (human) mapping to 1p35.3; Mecr (mouse) mapping to 4 D2.3.

SOURCE

Mecr (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Mecr of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-160510 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Mecr (G-12) is recommended for detection of Mecr of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Mecr (G-12) is also recommended for detection of Mecr in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Mecr siRNA (h): sc-88164, Mecr siRNA (m): sc-149345, Mecr shRNA Plasmid (h): sc-88164-SH, Mecr shRNA Plasmid (m): sc-149345-SH, Mecr shRNA (h) Lentiviral Particles: sc-88164-V and Mecr shRNA (m) Lentiviral Particles: sc-149345-V.

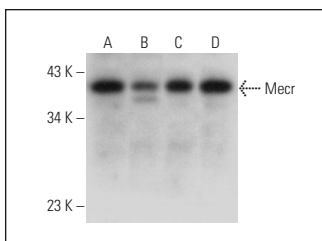
Molecular Weight of Mecr isoforms: 40/32 kDa.

Positive Controls: Mecr (m): 293T Lysate: sc-125592, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

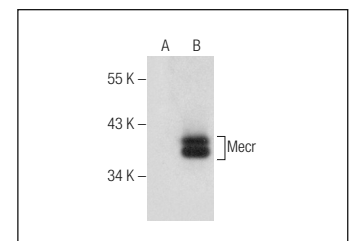
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: 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.

DATA



Mecr (G-12): sc-160510. Western blot analysis of Mecr expression in K-562 (A), HeLa (B), HL-60 (C) and Jurkat (D) whole cell lysates.



Mecr (G-12): sc-160510. Western blot analysis of Mecr expression in non-transfected: sc-117752 (A) and mouse Mecr transfected: sc-125592 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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