

MECR Antibody

Catalog # ASC11588

Product Information

Application	WB, E
Primary Accession	Q9BV79
Other Accession	NP_057095 , 67078404
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	40462
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	MECR antibody can be used for detection of MECR by Western blot at 1 - 2 μ g/mL.

Additional Information

Gene ID	51102
Other Names	Trans-2-enoyl-CoA reductase, mitochondrial, 1.3.1.38, Nuclear receptor-binding factor 1, HsNr1b1, NR1B1, MECR, NBRF1
Target/Specificity	MECR; At least two isoforms of MECR are known to exist; this antibody will detect both isoforms.
Reconstitution & Storage	MECR antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	MECR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MECR
Synonyms	NBRF1
Function	Catalyzes the NADPH-dependent reduction of trans-2-enoyl thioesters in mitochondrial fatty acid synthesis (fatty acid synthesis type II). Fatty acid chain elongation in mitochondria uses acyl carrier protein (ACP) as an acyl group carrier, but the enzyme accepts both ACP and CoA thioesters as substrates in vitro. Displays a preference for medium-chain over short- and long-chain substrates (PubMed: 12654921 , PubMed: 18479707 , PubMed: 27817865). May provide the octanoyl chain used for lipoic acid biosynthesis, regulating protein lipoylation and mitochondrial respiratory activity particularly in Purkinje cells (By similarity). Involved in iron

homeostasis; affecting Fe-S cluster assembly and ceramide metabolism (PubMed:[37653044](#)). Required for proper morphology and bioenergetic functions of mitochondria (PubMed:[37653044](#)). Required for maintenance of neurons (By similarity).

Cellular Location [Isoform 1]: Mitochondrion

Tissue Location Highly expressed in skeletal and heart muscle. Expressed at lower level in placenta, liver, kidney and pancreas Weakly or not expressed in lung.

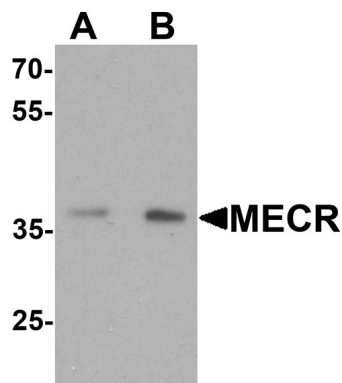
Background

MECR Antibody: The mitochondrial trans-2-enoyl-CoA reductase (MECR), was initially identified as nuclear receptor-binding factor 1 (NRBF1), which can interact with a multitude of nuclear hormone receptors in the presence of the respective ligands. MECR has been shown to be part of the mitochondrial fatty acid synthesis (FAS II) system and to catalyze the NADPH-dependent reduction of 2-enoyl thioesters, generating saturated acyl-groups. Overexpression of this gene in transgenic mice can lead to cardiac abnormalities, suggesting that inappropriate expression of genes of FAS II can result in the development of hereditary cardiomyopathy.

References

Masuda N, Yasumo H, Furusawa T, et al. Nuclear receptor binding factor-1 (NRBF-1), a protein interacting with a wide spectrum of nuclear hormone receptors. *Gene* 1998; 221:225-33.
Chen Z, Leskinen H, Liimatta E, et al. Myocardial overexpression of Mecn, a gene of mitochondrial FAS II leads to cardiac dysfunction in mouse. *PLoS One* 2009; 4:e5589.

Images



Western blot analysis of MECR in human brain tissue lysate with MECR antibody at (A) 1 and (B) 2 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.