10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MECR Antibody
Catalog # ASC11588

Specification

MECR Antibody - Product Information

Application	**IF**
Primary Accession	Q9BV79
Other Accession	NP_057095, 51102
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 41 kDa KDa**
Application Notes	**MECR antibody can be used for detection of MECR by Western blot at 1 - 2 µg/mL.**

MECR Antibody - Additional Information

Gene ID	**51102**

Target/Specificity
Rabbit polyclonal MECR antibody was raised against a 15 amino acid peptide near the carboxy terminus of human MECR.

The immunogen is located within amino acids 300 - 350 of MECR.

Reconstitution & Storage
MECR antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
MECR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

MECR Antibody - 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:<a href="http://www.uniprot.org/citations/37653044"

target="_blank">37653044). Required for proper morphology and bioenergetic functions of mitochondria (PubMed:37653044). Required for maintenance of neurons (By similarity).

Cellular Location
[Isoform 1]: Mitochondrion

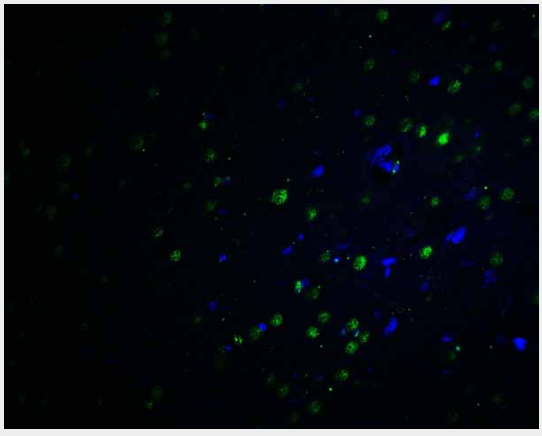
Tissue Location
Highly expressed in skeletal and heart muscle. Expressed at lower level in placenta, liver, kidney and pancreas Weakly or not expressed in lung.

MECR Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

MECR Antibody - Images



Immunofluorescence of PLAGL2 in rat brain tissue with PLAGL2 antibody at 20 µg/ml.

MECR Antibody - 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 NAPDH-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.

MECR Antibody - 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 Mecr, a gene of mitochondrial FAS II leads to cardiac dysfunction in mouse. PLoS One 2009; 4:e5589.