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

ERAB/HCD2 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10200

Specification

ERAB/HCD2 Antibody - Product Information

Application	**WB**
Primary Accession	O70351
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**27246**

ERAB/HCD2 Antibody - Additional Information

Gene ID 63864

Positive Control	**Rat kidney tissue lysate, mouse 3T3 cell lysate, and Jurkat cell lysate**
Application & Usage	**The antibody can be used for Western blot analysis (1-4 µg/ml). However, the optimal conditions should be determined individually. Blocking peptide is available separately.**

Other Names
3-hydroxyacyl-CoA dehydrogenase type-2

Target/Specificity
ERAB/HCD2

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) affinity purified rabbit anti-ERAB/HCD2 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 5 mM EDTA and 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
ERAB/HCD2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ERAB/HCD2 Antibody - Protein Information

Name Hsd17b10

Synonyms Erab, Hadh2

Function
Mitochondrial dehydrogenase involved in pathways of fatty acid, branched-chain amino acid and steroid metabolism. Acts as (S)-3- hydroxyacyl-CoA dehydrogenase in mitochondrial fatty acid beta- oxidation, a major degradation pathway of fatty acids. Catalyzes the third step in the beta-oxidation cycle, namely the reversible conversion of (S)-3-hydroxyacyl-CoA to 3-ketoacyl-CoA. Preferentially accepts straight medium- and short-chain acyl-CoA substrates with highest efficiency for (3S)-hydroxybutanoyl-CoA. Acts as 3-hydroxy-2- methylbutyryl-CoA dehydrogenase in branched-chain amino acid catabolic pathway. Catalyzes the oxidation of 3-hydroxy-2-methylbutanoyl-CoA into 2-methyl-3-oxobutanoyl-CoA, a step in isoleucine degradation pathway. Has hydroxysteroid dehydrogenase activity toward steroid hormones and bile acids. Catalyzes the oxidation of 3alpha-, 17beta-, 20beta- and 21-hydroxysteroids and 7alpha- and 7beta-hydroxy bile acids. Oxidizes allopregnanolone/brexanolone at the 3alpha-hydroxyl group, which is known to be critical for the activation of gamma-aminobutyric acid receptors (GABAARs) chloride channel. Has phospholipase C-like activity toward cardiolipin and its oxidized species. Likely oxidizes the 2'- hydroxyl in the head group of cardiolipin to form a ketone intermediate that undergoes nucleophilic attack by water and fragments into diacylglycerol, dihydroxyacetone and orthophosphate. Has higher affinity for cardiolipin with oxidized fatty acids and may degrade these species during the oxidative stress response to protect cells from apoptosis. By interacting with intracellular amyloid-beta, it may contribute to the neuronal dysfunction associated with Alzheimer disease (AD). Essential for structural and functional integrity of mitochondria.

Cellular Location
Mitochondrion {ECO:0000250|UniProtKB:Q99714}. Mitochondrion matrix, mitochondrion nucleoid {ECO:0000250|UniProtKB:Q99714}

ERAB/HCD2 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

ERAB/HCD2 Antibody - Images

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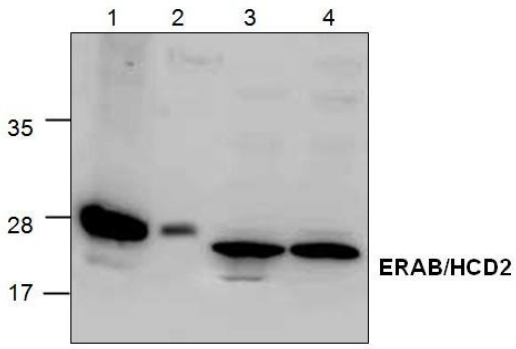

Western blot analysis of ERAB/HCD2 using rat kidney tissue lysate (Lane 1), mouse 3T3 cell lysate (Lane 2) and Jurkat cell lysate (Lane 3 & 4).

ERAB/HCD2 Antibody - Background

ERAB/HCD2 (Hydroxyacyl-Coenzyme A dehydrogenase) is a mitochondrial protein that catalyzes the oxidation of straight-chain 3-hydroxyacyl-CoAs as part of the beta-oxidation pathway. ERAB is characterized as a NAD+-dependent dehydrogenase that overexpressed in neurons affected with Alzheimer's disease.