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Anti-HADHB Antibody

Rabbit Anti Human Polyclonal Antibody
Catalog # ALS18607

Product Information

Application	WB, IHC-P, IF
Primary Accession	P55084
Predicted	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	51294

Additional Information

Gene ID	3032
Alias Symbol	HADHB
Other Names	HADHB, Acetyl-CoA acyltransferase, Beta-ketothiolase, ECHB, MTPB, MSTP029, TP-BETA
Target/Specificity	Human HADHB
Reconstitution & Storage	Affinity purified
Precautions	Anti-HADHB Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HADHB
Function	Mitochondrial trifunctional enzyme catalyzes the last three of the four reactions of the mitochondrial beta-oxidation pathway (PubMed:1550553, PubMed:16423905, PubMed:26474213, PubMed:29915090, PubMed:30850536, PubMed:8135828). The mitochondrial beta-oxidation pathway is the major energy-producing process in tissues and is performed through cycles of four consecutive reactions (PubMed:26474213, PubMed:29915090). Each beta-oxidation cycle shortens the fatty acyl-CoA by two carbons, yielding one acetyl-CoA (for the citric acid cycle), one FADH(2), and one NADH (which donate electrons to the respiratory chain for ATP production) (PubMed:26474213, PubMed:29915090). These cycles repeat until the chain is fully degraded to acetyl-CoA units (PubMed:26474213, PubMed:29915090). Among the enzymes involved in this pathway, the trifunctional protein, responsible for the hydration, dehydrogenation, and thiolysis steps, shows specificity for long-chain fatty acids, such as those from

dietary and stored fats (PubMed:30850536). Mitochondrial trifunctional enzyme is a heterotetrameric complex composed of two proteins, the trifunctional enzyme subunit alpha/HADHA carries the 2,3-enoyl-CoA hydratase and the 3-hydroxyacyl-CoA dehydrogenase activities while the trifunctional enzyme subunit beta/HADHB described here bears the 3-ketoacyl-CoA thiolase activity (PubMed:16423905, PubMed:26474213, PubMed:29915090, PubMed:30850536, PubMed:38372965, PubMed:8135828). These activities have been experimentally confirmed on a few substrates derived from beta-oxidation of long-chain saturated fatty acids such as palmitate (hexadecanoate) and laurate (dodecanoate) (PubMed:1550553, PubMed:8135828, PubMed:8163672, PubMed:8651282). In addition, based on its established catalytic mechanism, and combined genetic interaction or mutant phenotype evidence, it is predicted to act also on other substrates, including long-chain unsaturated fatty acids such as oleate (9Z-octadecenoate), linoleate (9Z,12Z-octadecadienoate), linolenate (9Z,12Z,15Z-octadecatrienoate), and others (Probable) (PubMed:26474213).

Cellular Location

Mitochondrion. Mitochondrion inner membrane Mitochondrion outer membrane. Endoplasmic reticulum. Note=Protein stability and association with membranes require HADHA

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