

Anti-HSD17B4 Picoband Antibody

Catalog # ABO10268

Product Information

Application	WB, IHC-P
Primary Accession	P51659
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Peroxisomal multifunctional enzyme type 2(HSD17B4) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	3295
Other Names	Peroxisomal multifunctional enzyme type 2, MFE-2, 17-beta-hydroxysteroid dehydrogenase 4, 17-beta-HSD 4, D-bifunctional protein, DBP, Multifunctional protein 2, MPF-2, Short chain dehydrogenase/reductase family 8C member 1, (3R)-hydroxyacyl-CoA dehydrogenase, 1.1.1.n12, Enoyl-CoA hydratase 2, 4.2.1.107, 4.2.1.119, 3-alpha, 7-alpha, 12-alpha-trihydroxy-5-beta-cholest-24-enoyl-CoA hydratase, HSD17B4, EDH17B4, SDR8C1
Calculated MW	79686
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μ g/ml, Human, By Heat Western blot, 0.1-0.5 μ g/ml, Human, Mouse, Rat
Subcellular Localization	Peroxisome.
Tissue Specificity	Present in many tissues with highest concentrations in liver, heart, prostate and testis.
Source	Eukaryota
Protein Name	Peroxisomal multifunctional enzyme type 2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	E.coli-derived human HSD17B4 recombinant protein (Position: D510-L736). Human HSD17B4 shares 87.7% and 89% amino acid (aa) sequence identity

with mouse and rat HSD17B4, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.

Protein Information

Name

HSD17B4 ([HGNC:5213](#))

Synonyms

EDH17B4, SDR8C1

Function

Bifunctional enzyme acting on the peroxisomal fatty acid beta-oxidation pathway. Catalyzes two of the four reactions in fatty acid degradation: hydration of 2-enoyl-CoA (trans-2-enoyl-CoA) to produce (3R)-3-hydroxyacyl-CoA, and dehydrogenation of (3R)-3-hydroxyacyl-CoA to produce 3-ketoacyl-CoA (3-oxoacyl-CoA), which is further metabolized by SCPx. Can use straight-chain and branched-chain fatty acids, as well as bile acid intermediates as substrates. May play a role in peroxisomal beta-oxidation step in polyunsaturated fatty acids (PUFAs) biosynthesis. Possibly regulates systemic levels of docosahexaenoic acid (DHA, C22:6n-3) through a process involving endoplasmic reticulum desaturation and elongation of alpha-linolenic acid (ALA, C18:3n-3) to form tetracosahexaenoic acid (THA, C24:6n-3), which is then beta-oxidized to DHA in peroxisomes.

Cellular Location

Peroxisome.

Tissue Location

Present in many tissues with highest concentrations in liver, heart, prostate and testis

Background

Peroxisomal multifunctional enzyme type 2 is a protein that in humans is encoded by the HSD17B4 gene. The protein encoded by this gene is a bifunctional enzyme that is involved in the peroxisomal beta-oxidation pathway for fatty acids. It also acts as a catalyst for the formation of 3-ketoacyl-CoA intermediates from both straight-chain and 2-methyl-branched-chain fatty acids. Defects in this gene that affect the peroxisomal fatty acid beta-oxidation activity are a cause of D-bifunctional protein deficiency (DBPD). An apparent pseudogene of this gene is present on chromosome 8. Multiple alternatively spliced transcript variants encoding distinct isoforms have been found for this gene.

Images

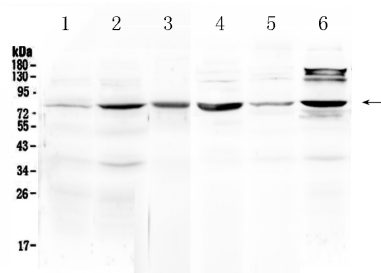


Figure 1. Western blot analysis of HSD17B4 using anti-HSD17B4 antibody (ABO10268). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat liver tissue lysates, Lane 2: mouse liver tissue lysates, Lane 3: mouse heart tissue lysates, Lane 4: mouse testis tissue lysates, Lane 5: MCF-7 whole Cell lysates, Lane 6: HELA whole cell lysates. After Electrophoresis, proteins were transferred to a

Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti- HSD17B4 antigen affinity purified polyclonal antibody (Catalog # ABO10268) at 0.5 μ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for HSD17B4 at approximately 80KD. The expected band size for HSD17B4 is at 80KD.

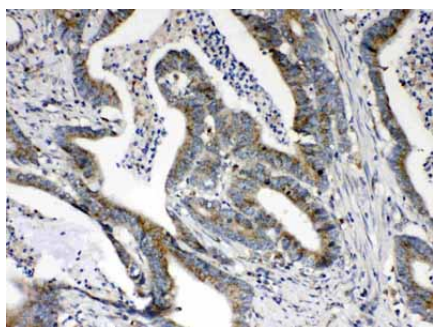


Figure 2. IHC analysis of HSD17B4 using anti- HSD17B4 antibody (ABO10268).HSD17B4 was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti- HSD17B4 Antibody (ABO10268) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

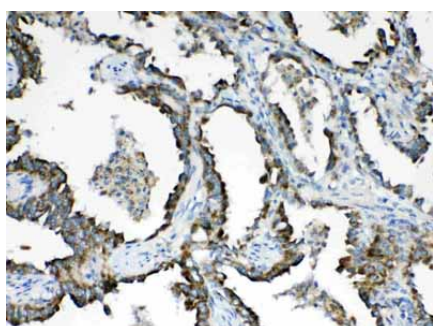


Figure 3. IHC analysis of HSD17B4 using anti- HSD17B4 antibody (ABO10268).HSD17B4 was detected in paraffin-embedded section of human lung cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti- HSD17B4 Antibody (ABO10268) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

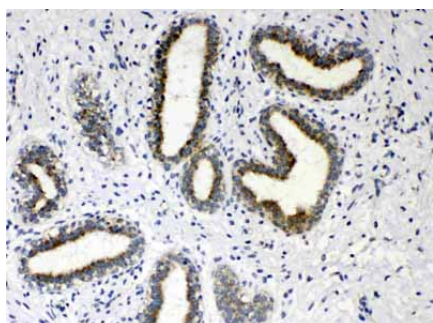


Figure 4. IHC analysis of HSD17B4 using anti- HSD17B4 antibody (ABO10268).HSD17B4 was detected in paraffin-embedded section of human mammary cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti- HSD17B4 Antibody (ABO10268) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.