Anti-Acetyl CoA Carboxylase 1 (ACC1) Antibody [ST53-08]

ET1609-77

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 266 kDa
Clone number:	ST53-08

Description: Acetyl-CoA carboxylase (ACC) is a complex multifunctional enzyme system which catalyzes the carboxylation of acetyl-CoA to malonyl-CoA, the rate-limiting step in fatty acid synthesis. Exercise diminishes the activity of acetyl-CoA carboxylase in human muscle. ACCα (ACC1) is the rate-limiting enzyme in the biogenesis of long-chain fatty acids, and ACCβ (ACC2) may control mitochondrial fatty acid oxidation. These two isoforms of ACC control the amount of fatty acids in the cells. The catalytic function of ACCα is regulated by phosphorylation (inactive) and dephosphorylation (active) of targeted serine residues and by allosteric transformation by citrate or palmitoyl-CoA, which serve as the enzyme's short-term regulatory mechanism. The gene encoding ACCα maps to human chromosome 17 and encodes a form of ACC, which is the major ACC in lipogenic tissues. The catalytic core of ACCβ is homologous to that of the ACCα, except for an additional peptide of about 150 amino acids at the N-terminus.

Immunogen: Synthetic peptide within Human ACC1 aa 382-427 / 2346.

Positive control: HeLa cell lysate, HepG2 cell lysate, HEK-293 cell lysate, A549 cell lysate, C2C12 cell lysate, RAW264.7 cell lysate, C6 cell lysate, human kidney tissue, mouse placenta tissue.

Subcellular location: Cytoplasm.

Database links: SwissProt: Q13085 Human | Q5SWU9 Mouse | P11497 Rat

Recommended Dilutions:

WB	1:1,000-1:2,000
IHC-P	1:50-1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

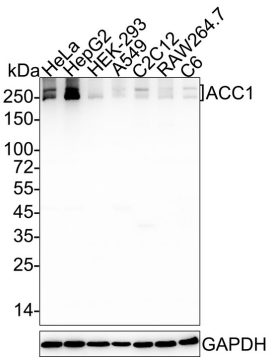

Fig1: Western blot analysis of Acetyl CoA Carboxylase 1 (ACC1) on different lysates with Rabbit anti-Acetyl CoA Carboxylase 1 (ACC1) antibody (ET1609-77) at 1/2,000 dilution.

Lane 1: HeLa cell lysate (20 µg/Lane)
Lane 2: HepG2 cell lysate (20 µg/Lane)
Lane 3: HEK-293 cell lysate (20 µg/Lane)
Lane 4: A549 cell lysate (20 µg/Lane)
Lane 5: C2C12 cell lysate (20 µg/Lane)
Lane 6: RAW264.7 cell lysate (20 µg/Lane)
Lane 7: C6 cell lysate (20 µg/Lane)

Predicted band size: 266 kDa
Observed band size: 250/266 kDa

Exposure time: 43 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1609-77) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

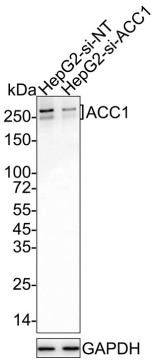

Fig2: Western blot analysis of Acetyl CoA Carboxylase 1 (ACC1) on different lysates with Rabbit anti-Acetyl CoA Carboxylase 1 (ACC1) antibody (ET1609-77) at 1/1,000 dilution.

Lane 1: HepG2-si NT cell lysate
Lane 2: HepG2-si ACC1 cell lysate

Lysates/proteins at 15 µg/Lane.

Predicted band size: 266 kDa
Observed band size: 250/266 kDa

Exposure time: 25 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1609-77) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

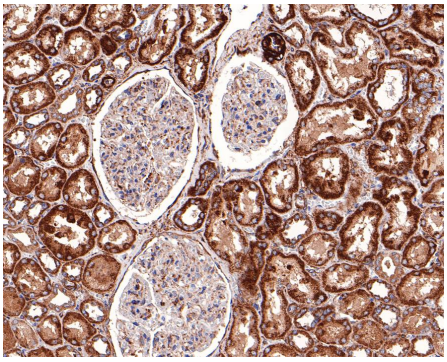

Fig3: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-Acetyl CoA Carboxylase 1 (ACC1) antibody (ET1609-77) at 1/100 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1609-77) at 1/100 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

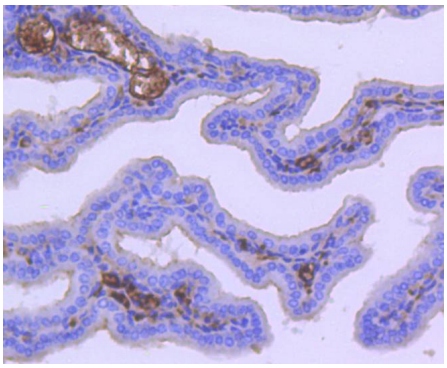

Fig4: Immunohistochemical analysis of paraffin-embedded mouse placenta tissue using anti-Acetyl CoA Carboxylase 1 (ACC1) antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1609-77, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Tiwari M et al. Loss of Caspase-2-dependent Apoptosis Induces Autophagy after Mitochondrial Oxidative Stress in Primary Cultures of Young Adult Cortical Neurons. J Biol Chem 286:8493-506 (2011).
2. Chang NW et al. Fenofibrate exhibits a high potential to suppress the formation of squamous cell carcinoma in an oral-specific 4-nitroquinoline 1-oxide/arecoline mouse model. Biochim Biophys Acta 1812:558-64 (2011).