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ACSS2 Antibody
Rabbit mAb
Catalog # AP90993

Specification

ACSS2 Antibody - Product Information

Application	**WB, ICC**
Primary Accession	Q9NR19
Reactivity	**Rat**
Clonality	**Monoclonal**

Other Names
ACSS2; ACSA; ACAS2; AceCS; MYH7B; Acetyl CoA synthetase;

Isotype	**Rabbit IgG**
Host	**Rabbit**
Calculated MW	**78580 Da**

ACSS2 Antibody - Additional Information

Dilution	**WB~~1:1000** **ICC~~N/A**
Purification	**Affinity-chromatography**
Immunogen	**A synthesized peptide derived from human ACSS2**
Description	**Activates acetate so that it can be used for lipid synthesis or for energy generation. Cytoplasmic acetyl-CoA synthetase (AceCS1) catalyzes the conversion of acetate and CoA to acetyl-CoA. Acetyl-CoA synthesized by AceCS1 is used for fatty acid and lipid biosynthesis. Studies suggest that this enzyme is regulated by sterol regulatory element-binding proteins.**
Storage Condition and Buffer	**Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.**

ACSS2 Antibody - Protein Information

Name ACSS2

Synonyms ACAS2

Function
Catalyzes the synthesis of acetyl-CoA from short-chain fatty acids (PubMed:10843999, PubMed:28003429, PubMed:<a

href="http://www.uniprot.org/citations/28552616" target="_blank">28552616). Acetate is the preferred substrate (PubMed:10843999, PubMed:28003429). Can also utilize propionate with a much lower affinity (By similarity). Nuclear ACSS2 promotes glucose deprivation-induced lysosomal biogenesis and autophagy, tumor cell survival and brain tumorigenesis (PubMed:28552616). Glucose deprivation results in AMPK-mediated phosphorylation of ACSS2 leading to its translocation to the nucleus where it binds to TFEB and locally produces acetyl-CoA for histone acetylation in the promoter regions of TFEB target genes thereby activating their transcription (PubMed:28552616). The regulation of genes associated with autophagy and lysosomal activity through ACSS2 is important for brain tumorigenesis and tumor survival (PubMed:28552616). Acts as a chromatin-bound transcriptional coactivator that up-regulates histone acetylation and expression of neuronal genes (By similarity). Can be recruited to the loci of memory-related neuronal genes to maintain a local acetyl-CoA pool, providing the substrate for histone acetylation and promoting the expression of specific genes, which is essential for maintaining long-term spatial memory (By similarity).

Cellular Location
Cytoplasm, cytosol. Cytoplasm {ECO:0000250|UniProtKB:Q9QXG4}. Nucleus Note=Glucose deprivation results in its AMPK-dependent phosphorylation and subsequent nuclear translocation (PubMed:28552616). Phosphorylation at Ser-659, leads to exposure of its nuclear localization signal which is required for its interaction with KPNA1 and subsequent translocation to the nucleus (PubMed:28552616). Found in the cytoplasm in undifferentiated neurons and upon differentiation, translocates to nucleus (By similarity). {ECO:0000250|UniProtKB:Q9QXG4, ECO:0000269|PubMed:28552616}

ACSS2 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

ACSS2 Antibody - Images

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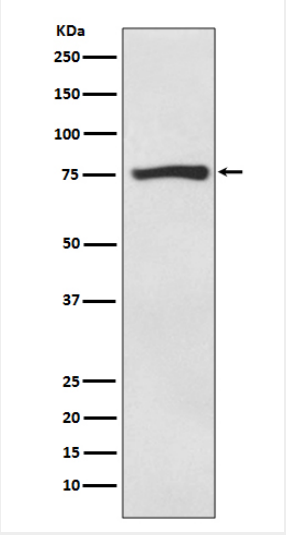

Western blot analysis of ACSS2 expression in HepG2 cell lysate.