

**Anti-ACSS2/Acetyl Coa Synthetase Rabbit Monoclonal Antibody**  
**Catalog # ABO13722****Specification****Anti-ACSS2/Acetyl Coa Synthetase Rabbit Monoclonal Antibody - Product Information**

Application	WB, IF, ICC
Primary Accession	<a href="#">Q9NR19</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

**Description**

Anti-ACSS2/Acetyl Coa Synthetase Rabbit Monoclonal Antibody . Tested in WB, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

**Anti-ACSS2/Acetyl Coa Synthetase Rabbit Monoclonal Antibody - Additional Information**

**Gene ID** 55902

**Other Names**

Acetyl-coenzyme A synthetase, cytoplasmic, 6.2.1.1, Acetate--CoA ligase, Acetyl-CoA synthetase, ACS, AceCS, Acetyl-CoA synthetase 1, ACSS2, ACAS2

**Calculated MW**

78580 MW KDa

**Application Details**

WB 1:500-1:2000<br>ICC/IF 1:50-1:200

**Subcellular Localization**

Cytoplasm.

**Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**

A synthesized peptide derived from human ACSS2

**Purification**

Affinity-chromatography

**Storage**

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

**Anti-ACSS2/Acetyl Coa Synthetase Rabbit Monoclonal Antibody - Protein Information**

**Name** ACSS2

**Synonyms** ACAS2

### Function

Catalyzes the synthesis of acetyl-CoA from short-chain fatty acids (PubMed:<a href="http://www.uniprot.org/citations/10843999" target="\_blank">10843999</a>, PubMed:<a href="http://www.uniprot.org/citations/28003429" target="\_blank">28003429</a>, PubMed:<a href="http://www.uniprot.org/citations/28552616" target="\_blank">28552616</a>). Acetate is the preferred substrate (PubMed:<a href="http://www.uniprot.org/citations/10843999" target="\_blank">10843999</a>, PubMed:<a href="http://www.uniprot.org/citations/28003429" target="\_blank">28003429</a>). 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:<a href="http://www.uniprot.org/citations/28552616" target="\_blank">28552616</a>). 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:<a href="http://www.uniprot.org/citations/28552616" target="\_blank">28552616</a>). The regulation of genes associated with autophagy and lysosomal activity through ACSS2 is important for brain tumorigenesis and tumor survival (PubMed:<a href="http://www.uniprot.org/citations/28552616" target="\_blank">28552616</a>). 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

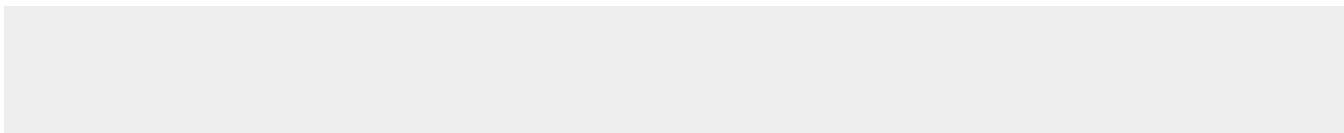
Cytoplasm, cytosol. Cytoplasm {ECO:0000250|UniProtKB:Q9QXG4}. Nucleus Note=Glucose deprivation results in its AMPK-dependent phosphorylation and subsequent nuclear translocation (PubMed:28552616). Phosphorylation at Ser-659, leads to exposure of its nuclear localization signal which is required for its 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}

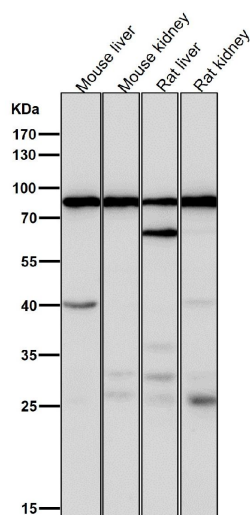
### Anti-ACSS2/Acetyl Coa Synthetase Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

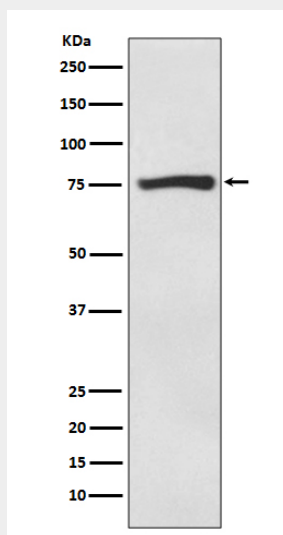
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-ACSS2/Acetyl Coa Synthetase Rabbit Monoclonal Antibody - Images





All lanes use the Antibody at 1:2K dilution for 1 hour at room temperature.



Western blot analysis of ACSS2 expression in HepG2 cell lysate.