

**ACSS2 Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP9606a****Specification**

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**ACSS2 Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">O9NR19</a>
Other Accession	<a href="#">O9QXG4</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	78580
Antigen Region	31-60

**ACSS2 Antibody (N-term) - Additional Information****Gene ID** 55902**Other Names**

Acetyl-coenzyme A synthetase, cytoplasmic, Acetate--CoA ligase, Acetyl-CoA synthetase, ACS, AceCS, Acyl-CoA synthetase short-chain family member 2, Acyl-activating enzyme, ACSS2, ACAS2

**Target/Specificity**

This ACSS2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 31-60 amino acids from the N-terminal region of human ACSS2.

**Dilution**

WB~~1:1000

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

ACSS2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**ACSS2 Antibody (N-term) - Protein Information****Name** ACSS2**Synonyms** ACAS2

**Function** Catalyzes the synthesis of acetyl-CoA from short-chain fatty acids (PubMed:[10843999](#), PubMed:[28003429](#), PubMed:[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

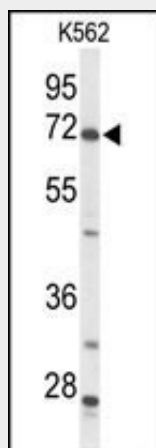
Cytoplasm, cytosol. Cytoplasm {ECO:0000250|UniProtKB:Q9QXG4}. Nucleus Note=Glucose deprivation results in its AMPK-dependent phosphorylation and subsequent nuclear translocation (PubMed:[28552616](#)). Phosphorylation at Ser-659, leads to exposure of its nuclear localization signal which is required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

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

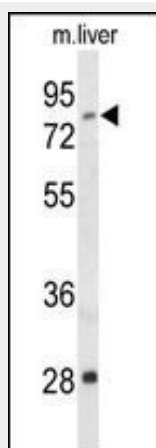
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### ACSS2 Antibody (N-term) - Images



Western blot analysis of ACSS2 Antibody (N-term) (Cat. #AP9606a) in K562 cell line lysates

(35ug/lane).ACSS2 (arrow) was detected using the purified Pab.



Western blot analysis of ACSS2 Antibody (N-term) (Cat. #AP9606a) in mouse liver tissue lysates (35ug/lane). ACSS2 (arrow) was detected using the purified Pab.

#### **ACSS2 Antibody (N-term) - Background**

ACSS2 is a cytosolic enzyme that catalyzes the activation of acetate for use in lipid synthesis and energy generation. The protein acts as a monomer and produces acetyl-CoA from acetate in a reaction that requires ATP.

#### **ACSS2 Antibody (N-term) - References**

- Yun, M., et al. J. Nucl. Med. 50(8):1222-1228(2009)  
Lu, Y., et al. J. Lipid Res. 49(12):2582-2589(2008)  
Sugiyama, N., et al. Mol. Cell Proteomics 6(6):1103-1109(2007)