

# ACSS2 Rabbit mAb

Catalog # AP75029

## Product Information

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<b>Application</b>	WB
<b>Primary Accession</b>	<a href="#">Q9NR19</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Purification</b>	Affinity Purified
<b>Calculated MW</b>	78580

## Additional Information

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<b>Gene ID</b>	55902
<b>Other Names</b>	ACSS2
<b>Dilution</b>	WB~~1:1000-1:5000
<b>Format</b>	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	ACSS2
<b>Synonyms</b>	ACAS2
<b>Function</b>	Catalyzes the synthesis of acetyl-CoA from short-chain fatty acids (PubMed: <a href="#">10843999</a> , PubMed: <a href="#">28003429</a> , PubMed: <a href="#">28552616</a> ). Acetate is the preferred substrate (PubMed: <a href="#">10843999</a> , PubMed: <a href="#">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="#">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="#">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="#">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).

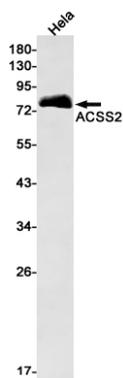
### Cellular Location

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}

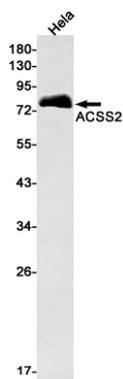
### Background

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.

### Images



Western blot analysis of ACSS2 in HeLa lysates using ACSS2 antibody.



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