

# ACSS2 Rabbit mAb

Catalog # AP75029

## Product Information

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|                   |                        |
|-------------------|------------------------|
| Application       | WB                     |
| Primary Accession | <a href="#">Q9NR19</a> |
| Reactivity        | Human                  |
| Host              | Rabbit                 |
| Clonality         | Monoclonal Antibody    |
| Calculated MW     | 78580                  |

## Additional Information

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|             |  |
|-------------|--|
| Gene ID     | 55902  |
| Other Names | ACSS2  |
| Dilution    | WB~~1/500-1/1000   |
| Format      | 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.    |
| Storage     | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |

## Protein Information

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|          |  |
|----------|--|
| Name     | ACSS2  |
| Synonyms | ACAS2  |
| Function | <p>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</p> |

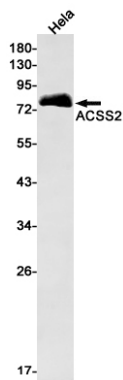
acetylation and promoting the expression of specific genes, which is essential for maintaining long-term spatial memory (By similarity).

## 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}

## Images

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