

KD-Validated Anti-ACSS2 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI2350**Specification****KD-Validated Anti-ACSS2 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC
Primary Accession	O9NR19
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 79 kDa ; Observed, 78 kDa KDa
Gene Name	ACSS2
Aliases	ACSS2; Acyl-CoA Synthetase Short Chain Family Member 2; ACS; DJ1161H23.1; ACAS2; ACSA; Acetyl-Coenzyme A Synthetase 2 (ADP Forming); Acetyl-Coenzyme A Synthetase, Cytoplasmic; Acetyl-CoA Synthetase 1; Acyl-Activating Enzyme; Propionate--CoA Ligase; EC 6.2.1.1; AceCS1; AceCS; ACECS; Acyl-CoA Synthetase Short-Chain Family Member 2; Cytoplasmic Acetyl-Coenzyme A Synthetase; Acetyl-CoA Synthetase; Acetate--CoA Ligase; Acetate Thiokinase; Acetate-CoA Ligase; EC 6.2.1.17; EC 6.2.1
Immunogen	A synthesized peptide derived from human ACSS2

KD-Validated Anti-ACSS2 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

KD-Validated Anti-ACSS2 Rabbit Monoclonal Antibody - 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:<a href="http://www.uniprot.org/citations/10843999"

target="_blank">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

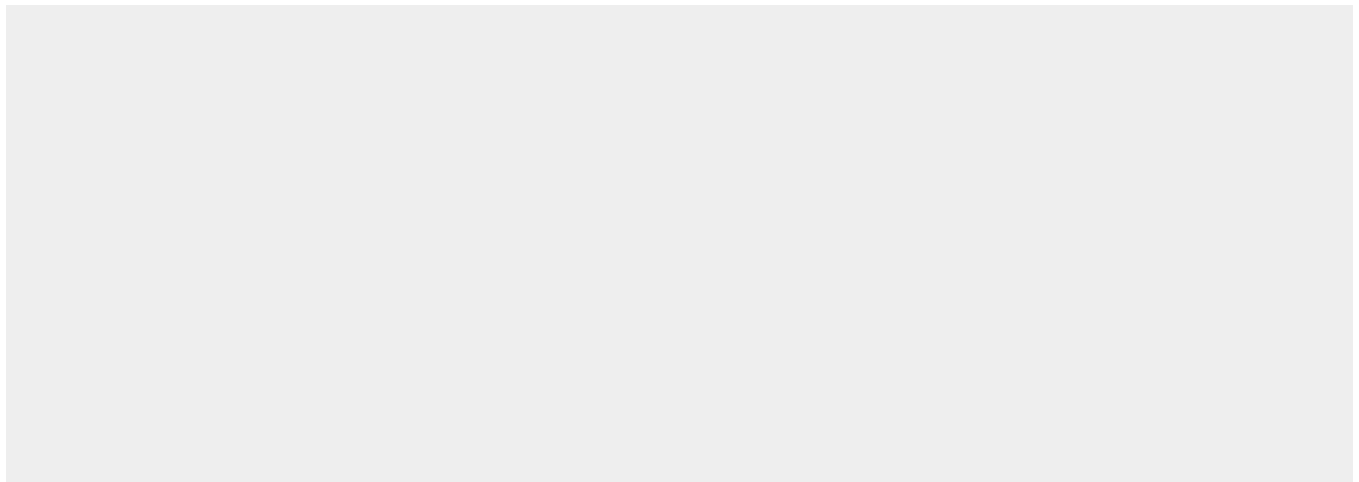
Cytoplasm, cytosol. Cytoplasm {ECO:0000250|UniProtKB:Q9QXG4}. Nucleus Note=Glucose deprivation results in its AMPK-dependent phosphorylation and subsequent nuclear translocation (PubMed:28552616). Phosphorylation at Ser-659, leads to exposure of its nuclear localization signal which is required for its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

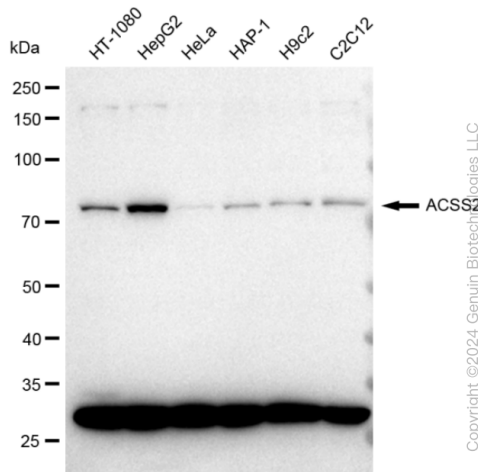
KD-Validated Anti-ACSS2 Rabbit Monoclonal Antibody - Protocols

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

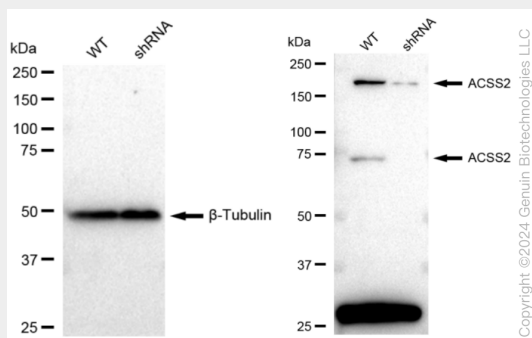
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KD-Validated Anti-ACSS2 Rabbit Monoclonal Antibody - Images

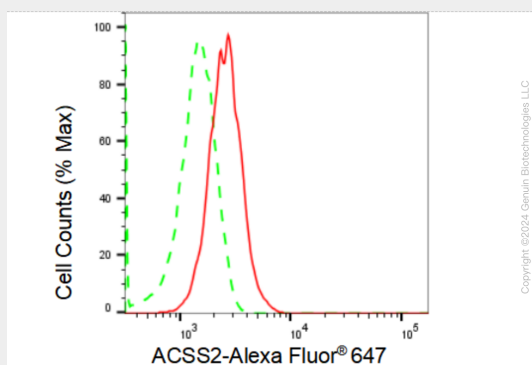




Western blotting analysis using anti-ACSS2 antibody (Cat#AGI2350). Total cell lysates (45 μ g) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-ACSS2 antibody (Cat#AGI2350, 1:2,500) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-ACSS2 antibody (Cat#AGI2350). ACSS2 expression in wild type (WT) and ACSS2 shRNA knockdown (KD) HeLa cells with 30 μ g of total cell lysates. β -Tubulin serves as a loading control. The blot was incubated with anti-ACSS2 antibody (Cat#AGI2350, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of ACSS2 expression in HepG2 cells using ACSS2 antibody (Cat#AGI2350, 1:2,000). Green, isotype control; red, ACSS2.