

For Research Use Only

# ACSS1 Monoclonal antibody

Catalog Number: 68608-1-Ig



## Basic Information

<b>Catalog Number:</b> 68608-1-Ig	<b>GenBank Accession Number:</b> BC039261	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 1000 µg/ml	<b>GeneID (NCBI):</b> 84532	<b>CloneNo.:</b> 3E10F11
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> Q9NUB1	<b>Recommended Dilutions:</b> WB 1:5000-1:50000
<b>Isotype:</b> IgG2b	<b>Full Name:</b> acyl-CoA synthetase short-chain family member 1	
<b>Immunogen Catalog Number:</b> AG10853	<b>Calculated MW:</b> 689 aa, 75 kDa	
	<b>Observed MW:</b> 70-75 kDa	

## Applications

<b>Tested Applications:</b> WB, ELISA	<b>Positive Controls:</b> WB : human placenta tissue, HepG2 cells, Caco-2 cells, Human heart tissue, Rat heart tissue, Mouse heart tissue
<b>Species Specificity:</b> Human, Mouse, Rat	

## Background Information

The ACSS (acetyl-CoA synthetase) enzyme is the sole known mammalian enzyme that can catalyze the conversion of free acetate into acetyl coenzyme A (acetyl-CoA). The three known isoforms of human ACSS are termed ACSS1, ACSS2, and ACSS3. The main substrate of ACSS1 and ACSS2 is acetate, while the preferential substrate of ACSS3 is propionate. Two acetate related enzymes, ACSS1 (GeneID: 84532) and ACSS2 (GeneID: 55902) differ in their tissue distribution and subcellular localization. On the one hand, as a mitochondrial matrix enzyme, ACSS1 is expressed mainly in cardiac and skeletal muscle as well as brown adipose tissue. On the other hand, as a nuclear and cytoplasmic enzyme, ACSS2 is strongly expressed in the liver, kidney and heart and moderately expressed in the brain and testis. ACSS2 participates in lipid synthesis and facilitates protein acetylation by generating acetyl-CoA, while ACSS1 is involved in acetate oxidation. The functional differences in these enzymes involve energy production through the tricarboxylic acid (TCA) cycle. Due to its more thorough utilization of intracellular acetate, ACSS2 is expressed in almost all cell types under different physiological conditions.

## Storage

**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.  
**Aliquoting is unnecessary for -20°C storage**

For technical support and original validation data for this product please contact:

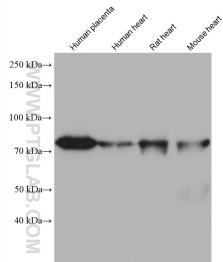
T: 4006900926

E: [Proteintech-CN@ptglab.com](mailto:Proteintech-CN@ptglab.com)

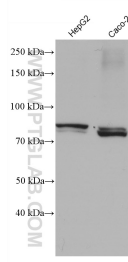
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## Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 68608-1-Ig (ACSS1 antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



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