

ACSS1 Recombinant antibody

Catalog Number: 85102-4-RR

Basic Information

Catalog Number:

85102-4-RR

Concentration:

1000 µg/ml

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG10853

GenBank Accession Number:

BC039261

GeneID (NCBI):

84532

UNIPROT ID:

Q9NUB1

Full Name:acyl-CoA synthetase short-chain
family member 1**Calculated MW:**

689 aa, 75 kDa

Observed MW:

75 kDa

Purification Method:

Protein A purification

CloneNo.:

242361C6

Recommended Dilutions:

WB 1:2000-1:10000

Applications

Tested Applications:

WB, FC (Intra), ELISA

Species Specificity:

human, mouse, rat

Positive Controls:WB : HepG2 cells, mouse heart tissue, Jurkat cells,
Caco-2 cells, rat heart tissue

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:

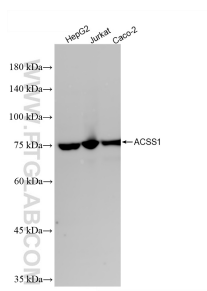
Store at -20°C. Stable for one year after shipment.

Storage Buffer:

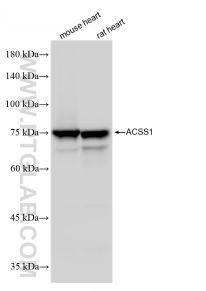
PBS with 0.02% sodium azide and 50% glycerol

Aliquoting is unnecessary for -20°C storage

Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 85102-4-RR (ACSS1 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



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1x10⁶ HeLa cells were intracellularly stained with 0.25 ug ACS1 Recombinant antibody (85102-4-RR, Clone:242361C6) and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2)(red), or 0.25 ug Rabbit IgG Isotype Control RecAb (98136-1-RR, Clone: 240953C9) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).