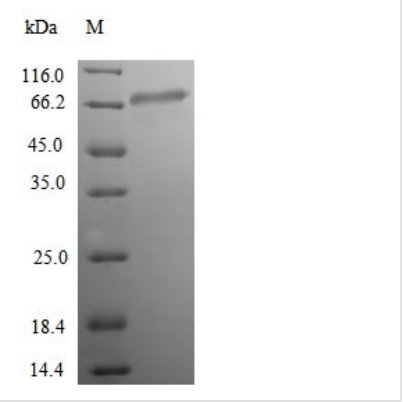
Recombinant Human Acetyl-coenzyme A synthetase 2-like, mitochondrial (ACSS1)

Product Code	CSB-EP882105HU
Relevance	Important for maintaining normal body temperature during fasting and for energy homeostasis. Essential for energy expenditure under ketogenic conditions. Converts acetate to acetyl-CoA so that it can be used for oxidation through the tricarboxylic cycle to produce ATP and CO2.
Abbreviation	Recombinant Human ACSS1 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q9NUB1
Alias	Acetate--CoA ligase 2 Acetyl-CoA synthetase 2
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	ASGPSGSAPAVAAAAAQPGSYPALSAQAAREPAAFWGPLARDTLVWDTPYH TVWDCDFSTGKIGWFLGGQLNVSVNCLDQHVRKSPESVALIWERDEPGTEVR ITYRELLETTCRLANTLKRHGVHRGDRVAIYMPVSPLAVAAMLACARIGAVHTVI FAGFSAESLAGRINDAKCKVVITFNQGLRGGRVVELKKIVDEAVKHCPTVQHVL VAHRTDNKVHMGDLDVPLEQEMAKEDPVCAPESMGSEDMLFMLYTSGSTGM PKGIVHTQAGYLLYAALTHKLVFDHQPGDIFGCVADIGWITGHSYVVYGPLCNG ATSVLFESTPVYPNAGRYWETVERLKINQFYGAPTAVRLLLKYGDAWVKKYDR SSLRTLGSVGEPINCEAWEWLHRVVGDSRCTLVDTWWQTETGGICIAPRPSE EGAEILPAMAMRPFFGIVPVLMDEKGSVVEGSNVSGALCISQAWPGMARTIYG DHQRFVDAYFKAYPGYYFTGDGAYRTEGGYYQITGRMDDVINISGHRLGTAEI EDAIADHPAVPESAVIGYPHDIKGEAAFAFIVVKDSAGDSDVVVQELKSMVATKI AKYAVPDEILVVKRLPKTRSGKVMRRLLRKIITSEAQELGDTTTLEDPSIIAEILSV YQKCKDKQAAAK
Research Area	others
Source	E.coli
Target Names	ACSS1
Protein Names	Recommended name: Acetyl-coenzyme A synthetase 2-like, mitochondrial EC= 6.2.1.1 Alternative name(s): Acetate--CoA ligase 2 Acetyl-CoA synthetase 2 Short name= AceCS2 Acyl-CoA synthetase short-chain family member 1
Expression Region	38-689aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Tag Info	N-terminal 6xHis-tagged
Mol. Weight	75.1kDa
Protein Length	Full Length of Mature Protein

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Amino acids 38-689 constitute the expression domain of recombinant Human ACSS1. This ACSS1 protein is theoretically predicted to have a molecular weight of 75.1 kDa. This ACSS1 protein is produced using e.coli expression system. The N-terminal 6xHis tag was fused into the coding gene segment of ACSS1, making it easier to detect and purify the ACSS1 recombinant protein in the later stages of expression and purification.

The human Acetyl-coenzyme A synthetase 2-like, mitochondrial (ACSS1) is a key enzyme involved in cellular energy metabolism. It catalyzes the conversion of acetate to acetyl-coenzyme A (acetyl-CoA), a critical intermediate in various metabolic pathways. ACSS1 plays a pivotal role in utilizing acetate as an alternative carbon source during metabolic stress or fasting. Research on ACSS1 spans areas of cellular energy homeostasis, metabolic adaptation, and understanding its implications in diseases related to altered metabolism. Exploring ACSS1 functions enhances the knowledge of fundamental metabolic processes, offering potential insights into therapeutic strategies for conditions where metabolic pathways are dysregulated, such as metabolic disorders or certain cancers.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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