

# Human AACS / Acetoacetyl-CoA Synthetase Protein (His Tag)

Catalog Number: 11117-H07B



**Sino Biological Inc.**

Biological Solution Specialist

## General Information

### Gene Name Synonym:

ACSF1, FLJ12389, FLJ41251, SUR-5, AACS

### Protein Construction:

A DNA sequence encoding the full length of human AACS isoform a (NP\_076417.2) (Met 1-Phe 672) was expressed, with a polyhistidine tag at the N-terminus.

**Source:** Human

**Expression Host:** Baculovirus-Insect Cells

## QC Testing

**Purity:** > 96 % as determined by SDS-PAGE

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** His

### Molecular Mass:

The recombinant human AACS consists of 690 amino acids and predicts a molecular mass of 77 kDa. It migrates as an approximately 60 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

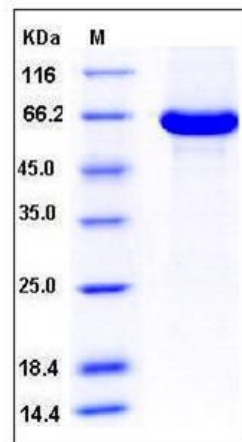
## Usage Guide

### Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

## SDS-PAGE:



## Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## Protein Description

Acetoacetyl-CoA synthetase, also known as Acyl-CoA synthetase family member 1, Protein sur-5 homolog, AACS, and ACSF1, is a member of the ATP-dependent AMP-binding enzyme family. AACS is highly expressed in kidney, heart and brain, but low in liver. AACS is an essential enzyme for the synthesis of fatty acid and cholesterol from ketone bodies. AACS in adipose tissue plays an important role in utilizing ketone body for the fatty acid-synthesis during adipose tissue development. AACS was found to be highly expressed in mouse adipose tissue, and GC box and C/EBPs motif were crucial for AACS promoter activity. Moreover, AACS promoter activity was controlled mainly by C/EBPalpha during adipogenesis. AACS is a novel cytosolic ketone body (acetoacetate)-specific ligase, the physiological role of which remains to be elucidated.

## References

1. Yamasaki, M. 2005, Biochem Biophys Res Commun. 335 (1): 215-9.
2. Hasegawa, S. et al., 2008, Biochim Biophys Acta. 1779 (6-7): 414-9.
3. Aguilo, F. et al., 2010, Biochem J. 427 (2): 255-64.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>