

# Recombinant human Argininosuccinate lyase/ASL protein

Catalog Number: ATGP1271

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-464aa

### UniProt No.

P04424

### NCBI Accession No.

NP\_000039

### Alternative Names

Argininosuccinate lyase, ASAL

## PRODUCT SPECIFICATION

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### Molecular Weight

53.8 kDa (484aa)

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 2mM DTT, 10% glycerol, 100mM NaCl

### Purity

> 95% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

ASL (argininosuccinate lyase) belongs to the lyase 1 family. ASL is an enzyme that catalyzes the reversible breakdown of argininosuccinate (ASA) producing the amino acids arginine and fumarate. Located in liver cytosol, ASL is the fourth enzyme of the urea cycle and involved in the biosynthesis of arginine in all species and the production of urea in ureotelic species. While ASS (argininosuccinate synthetase) catalyzes the formation of argininosuccinate from citrulline and aspartate, ASL breaks the newly formed argininosuccinate into L-arginine and fumarate. L-arginine continues through the urea cycle to form urea and ornithine, while fumarate can enter

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the citric acid cycle. Recombinant human ASL protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography techniques.

## Amino acid Sequence

<MGSSHHHHH SSGLVPRGSH> MASESGKLWG GRFVGAVDPI MEKFNASIAY DRHLWEVDVQ GSKAYSRGLE  
KAGLLTKAEM DQILHGLDKV AEEWAQGTFK LNSNDEDIHT ANERRLKELI GATAGKLHTG RSRNDQVVTDLRLWMRQTCS  
TLSGLLWELI RTMVDRAEAE RDVLFPGYTH LQRAQPIRWS HWILSHAVAL TRDSERLLEV RKRINVLPLG SGAIAGNPLG  
VDRELLRAEL NFGAITLNSM DATSERDFVA EFLFWASLCM THLSRMAEDL ILYCTKEFSF VQLSDAYSTG SSLMPQKKNP  
DSLELIRSKA GRVFGRCAGL LMTLKGLPST YNKDLQEDKE AVFEVSDTMS AVLQVATGVI STLQIHQENM GQALSPDMLA  
TDLAYYLVRK GMPFRQAHEA SGKAVFMAET KGVALNQLSL QELQTISPLF SGDVICVWDY GHSVEQYGAL GGTARSSVDW  
QIRQVRALLQ AQQA

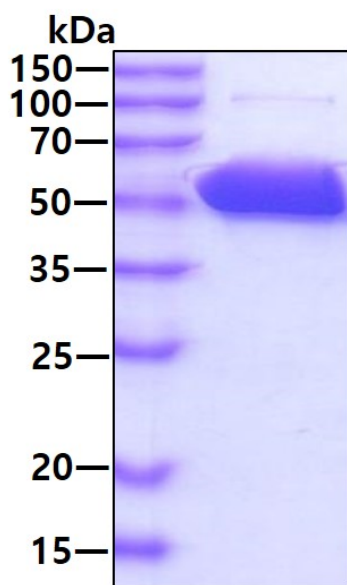
## General References

Barbosa P, et al. (2008). *J Biol Chem.* 266(8):5286-90

Zhao S., et al (2010) *Science* 327:1000-1004

## DATA

### SDS-PAGE



3 $\mu$ g by SDS-PAGE under reducing condition and visualized by coomassie blue stain.