

# Recombinant human Aminoacylase/ACY1 protein

Catalog Number: ATGP0659

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-408aa

### UniProt No.

Q03154

### NCBI Accession No.

NP\_000657.1

### Alternative Names

Aminoacylase 1, ACY1D, ACYLASE, Aminoacylase 1

## PRODUCT SPECIFICATION

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### Molecular Weight

48kDa (428aa) confirmed by MALDI-TOF

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

### Purity

> 90% 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

Aminoacylase-1 is a cytosolic, homodimeric, zinc-binding enzyme that catalyzes the hydrolysis of acylated L-amino acids to L-amino acids and acyl group, and has been postulated to function in the catabolism and salvage of acylated amino acids. Defects in ACY1 are the cause of aminoacylase-1 deficiency (ACY1D). ACY1D results in a metabolic disorder manifesting with encephalopathy, unspecific psychomotor delay, psychomotor delay with atrophy of the vermis and syringomyelia, marked muscular hypotonia or normal clinical features. Epileptic seizures are a frequent feature. All affected individuals exhibit markedly increased urinary excretion of several N-

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acetylated amino acids. Recombinant human ACY1 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

## Amino acid Sequence

<MGSSHHHHHH SSGLVPRGSH M>TSKGPEEEH PSVTLFRQYL RIRTVQPKPD YGAAVAFFEE TARQLGLGCQ  
KVEVAPGYVV TVLTWPGTNP TLSSILLNSH TDVVPVFKEH WSHDPFEAFK DSEGYYIARG AQDMKCVSIQ YLEAVRRLKV  
EGHRFPRTIH MTFVPDEEVG GHQGMELFVQ RPEFHALRAG FALDEGIANP TDAFTVFYSE RSPWWVRVTS TGRPGHASRF  
MEDTAAEKLH KVVNSILAFR EKEWQRLQSN PHLKEGSVTS VNLTKLEGGV AYNVIPATMS ASFDFRVAPD VDFKAFEEQL  
QSWCQAAGEG VTLEFAQKWM HPQVTPTDDS NPWWAAFSRV CKDMNLTLEP EIMPAATDNR YIRAVGVPAL  
GFSPMNRTPV LLHDHDERLH EAVFLRGVDI YTRLLPALAS VPALPSDS

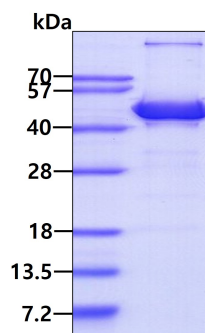
## General References

Sass J.O., et al. (2006) Am. J. Hum. Genet. 78:401-409

Van Coster RN., et al. (2005) Biochem Biophys Res Commun. 338(3):1322-6

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.