Recombinant human Aminoacylase/ACY1 protein

Catalog Number: ATGP0659

PRODUCT INFORMATION

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

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

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

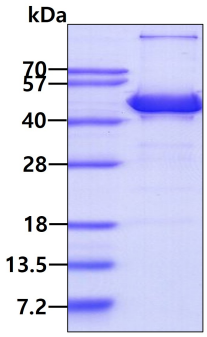
<MGSSHHHHHH SSGLVPRGSH M>TSKGPEEEH PSVTLFRQYL RIRTVQPKPD YGAAVAFFEE TARQLGLGCQ KVEVAPGYVV TVLTWPGTNP TLSSILLNSH TDVVPVFKEH WSHDPFEAFK DSEGYIYARG AQDMKCVSIQ YLEAVRRLKV EGHRFPRTIH MTFVPDEEVG GHQGMELFVQ RPEFHALRAG FALDEGIANP TDAFTVFYSE RSPWWVRVTS TGRPGHASRF MEDTAAEKLH KVVNSILAFR EKEWQRLQSN PHLKEGSVTS VNLTKLEGGV 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.