

Recombinant Mouse ACY1/Aminoacylase-1 Protein (His Tag)

Catalog No. PKSM040921

Note: Centrifuge before opening to ensure complete recovery of vial contents.

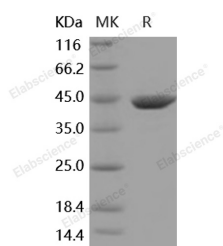
Description

Synonyms	1110014J22Rik;Acy-1
Species	Mouse
Expression Host	HEK293 Cells
Sequence	Met 1-Ser 408
Accession	Q99JW2
Calculated Molecular Weight	45 kDa
Observed molecular weight	45 kDa
Tag	C-His
Bioactivity	Measured by its ability to cleave N-acetyl-L-Methione (Ac-Met). The specific activity is > 4,000 pmoles/min/μg.

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

Aminoacylase 1 (ACY1), a metalloenzyme that removes amide-linked ACY1 groups from amino acids and may play a

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role in regulating responses to oxidative stress. Both the C-terminal fragment found in the two-hybrid screen and full-length ACY1 co-immunoprecipitate with SphK1. Though both C-terminal and full-length proteins slightly reduce SphK1 activity measured in vitro, the C-terminal fragment inhibits while full-length ACY1 potentiates the effects of SphK1 on proliferation and apoptosis. It suggested that ACY1 physically interacts with SphK1 and may influence its physiological functions. As a homodimeric zinc-binding enzyme, Aminoacylase 1 catalyzes the hydrolysis of N alpha-acylated amino acids. Deficiency of Aminoacylase 1 due to mutations in the Aminoacylase 1 (ACY1) gene follows an autosomal-recessive trait of inheritance and is characterized by accumulation of N-acetyl amino acids in the urine.