

## Recombinant Human ACY1/Aminoacylase-1 Protein (His Tag)

Catalog Number: PKSH031535

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

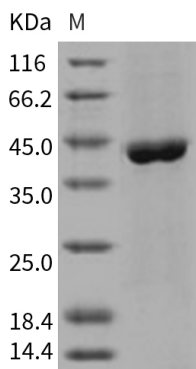
### Description

<b>Species</b>	Human
<b>Source</b>	Baculovirus-Insect Cells-derived Human ACY1/Aminoacylase-1 protein Met 1-Ser 408, with an C-terminal His
<b>Calculated MW</b>	47.3 kDa
<b>Observed MW</b>	44 kDa
<b>Accession</b>	NP_000657.1
<b>Bio-activity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	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.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0, 10% glycerol Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	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 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.

### For Research Use Only

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