



# Recombinant Protein Technical Manual

## Recombinant Mouse ACY1/Aminoacylase Protein (His Tag)(Active) RPES0254

### Product Data:

**Product SKU:** RPES0254

**Size:** 20µg

**Species:** Mouse

**Expression host:** HEK293 Cells

**Uniprot:** Q99JW2

### Protein Information:

**Molecular Mass:** 45 kDa

**AP Molecular Mass:** 45 kDa

**Tag:** C-His

**Bio-activity:** Measured by its ability to cleave N-acetyl-L-Methione (Ac-Met). The specific activity is >4,000 pmoles/min/µg.

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage:** 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

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** 1110014J22Rik;Acy

## Immunogen Information:

**Sequence:** Met 1-Ser 408

## 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.