

Human ATG8 / GABARAPL1 Protein (His Tag)



Sino Biological Inc.
Biological Solution Specialist

Catalog Number: 14549-H07E

General Information

Gene Name Synonym:

APG8-LIKE; APG8L; ATG8; ATG8B; ATG8L; GEC1

Protein Construction:

A DNA sequence encoding the human GABARAPL1 (Q9H0R8) (Met1-Lys117) was expressed with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His

Molecular Mass:

The recombinant human GABARAPL1 consists of 132 amino acids and predicts a molecular mass of 15.9 KDa. It migrates as an approximately 20-22 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

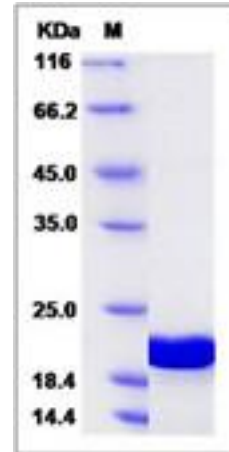
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

ATG8, also known as GABARAPL1, is a ubiquitin-like protein which has a crystal structure. ATG8 consists of a 5-stranded β -sheet, which is enclosed by two α -helices at one side and one α -helix at the other side and exhibits a conserved GABARAP domain. It functions in the formation of autophagosomal membranes. The transient conjugation of ATG8 to the autophagosomal membrane through a ubiquitin-like conjugation system is essential for autophagy in eukaryotes. Autophagy is induced upon nutrient depletion or rapamycin treatment and leads to the response of more than 30 autophagy-related (ATG) genes known so far, including ATG8.

References

- 1.Ohsumi Y, *et al.* (2004) The crystal structure of microtubule-associated protein light chain 3, a mammalian homologue of *Saccharomyces cerevisiae* Atg8. *Genes Cells.* 9(7):611-8.
- 2.Geng J, *et al.* (2008) The Atg8 and Atg12 ubiquitin-like conjugation systems in macroautophagy. 'Protein modifications: beyond the usual suspects' review series. *EMBO Rep.* 9(9):859-644.
- 3.Suzuki NN, *et al.* (2005) The crystal structure of plant ATG12 and its biological implication in autophagy. *Autophagy.* 1(2):119-126.

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