Datasheet for ABIN752479

anti-ATG4D antibody (AA 381-474) (Cy7)

1 Image

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Overview

Quantity:	100 µL
Target:	ATG4D
Binding Specificity:	AA 381-474
Reactivity:	Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This ATG4D antibody is conjugated to Cy7
Application:	Western Blotting (WB), Immunofluorescence (Cultured Cells) (IF (cc)), Immunofluorescence (Paraffin-embedded Sections) (IF (p))

Product Details

Immunogen:	KLH conjugated synthetic peptide derived from human ATG4D
Isotype:	IgG
Cross-Reactivity:	Mouse
Predicted Reactivity:	Human,Rat,Dog,Cow,Pig
Purification:	Purified by Protein A.

Target Details

Target:	ATG4D
Alternative Name:	ATG4D (ATG4D Products)

Target Details

Background:	Synonyms: APG4D, AUTL4, APG4-D, Cysteine protease ATG4D, AUT-like 4 cysteine endopeptidase, Autophagin-4, Autophagy-related cysteine endopeptidase 4, Autophagy-related protein 4 homolog D, ATG4D Background: Cysteine protease ATG4D: Cysteine protease required for the cytoplasm to vacuole transport (Cvt) and autophagy. Cleaves the C-terminal amino acid of ATG8 family proteins MAP1LC3 and GABARAPL2, to reveal a C-terminal glycine. Exposure of the glycine at the C-terminus is essential for ATG8 proteins conjugation to phosphatidylethanolamine (PE) and insertion to membranes, which is necessary for autophagy. Has also an activity of delipidating enzyme for the PE-conjugated forms. Cysteine protease ATG4D, mitochondrial: Plays a role as an autophagy regulator that links mitochondrial dysfunction with apoptosis. The mitochondrial import of ATG4D during cellular stress and differentiation may play important roles in the regulation of mitochondrial physiology, ROS, mitophagy and cell viability.
Gene ID:	84971
UniProt:	Q86TL0
Pathways:	Autophagy

Application Details

Application Notes:	IF(IHC-P) 1:50-200
	IF(IHC-F) 1:50-200
	IF(ICC) 1:50-200

Restrictions:	For Research Use only

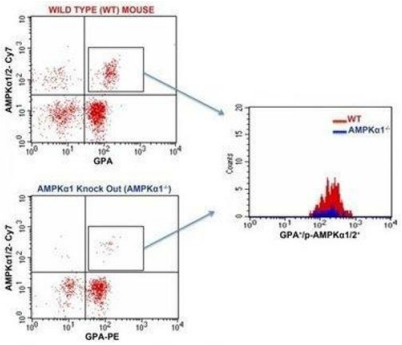
Handling

Format:	Liquid
Concentration:	1 μg/μL
Buffer:	Aqueous buffered solution containing 0.01M TBS (pH 7.4) with 1 % BSA, 0.03 % Proclin300 and 50 % Glycerol.
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.
Storage:	-20 °C

Handling

Storage Comment:	Store at -20°C. Aliquot into multiple vials to avoid repeated freeze-thaw cycles.
Expiry Date:	12 months

Images



AMPK, a hetero-trimeric enzyme, is the master-regulator of cellular energetics and metabolism. AMPKα with two isoforms (AMPKα1 and AMPKα2) is the catalytic unit of AMPK. AMPKα1 is a predominant isoform in endothelial cells, immune cells as well as circulating blood cells. RBCs primarily (70 – 90%) express AMPKα1. Genetic deletion of AMPKα1 in mouse causes loss in RBCs deformability index (that is increased RBCs rigidity) and severe splenomegaly. In humans diabetics have poor AMPK-activity and erythrocytic DI-values. Therefore, we analyzed RBCs for AMPK-activity via FACS-analysis of AMPKα1 phosphorylation with RBC-associated marker GPA. Whole blood samples were stained with fluorochrome-conjugated antibodies as shown above and analyzed using a four-color flow cytometer (FACS Calibur, BD Biosciences, San Diego, CA) and CellQuest software. Very mild p-AMPKα present in the AMPKα1 KO mouse can be seen due to presence of low level of AMPKα2 in RBCs.

Flow Cytometry

Image 1. FACS Analysis of Glycophorin A and phospho-AMPK alpha 1/2 (Thr172/183) in Red Blood Cells in WT and AMPK alpha 1 knockout mice using Rabbit Anti-GPA Polyclonal Antibody . Image kindly submitted by Nasrul Hoda, PhD, Georgia Regents University