10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-ATG13 (RABBIT) Antibody
ATG13 Antibody
Catalog # ASR5500

Specification

Anti-ATG13 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**This affinity purified antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 56.6 kDa in size corresponding to human ATG13 protein by western blotting in the appropriate stimulated tissue or cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**This affinity purified antibody was prepared by repeated immunizations with a synthetic peptide corresponding to the S318 region of ATG13.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-ATG13 (RABBIT) Antibody - Additional Information

Gene ID 9776

Other Names
9776

Purity
This affinity-purified antibody is directed against human ATG13 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross reactivity with ATG13 from human based on 100% sequence homology with the immunogen. Reactivity against homologues from other sources is not known.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-ATG13 (RABBIT) Antibody - Protein Information

Name ATG13

Synonyms KIAA0652

Function
Autophagy factor required for autophagosome formation and mitophagy. Target of the TOR kinase signaling pathway that regulates autophagy through the control of the phosphorylation status of ATG13 and ULK1, and the regulation of the ATG13-ULK1-RB1CC1 complex. Through its regulation of ULK1 activity, plays a role in the regulation of the kinase activity of mTORC1 and cell proliferation.

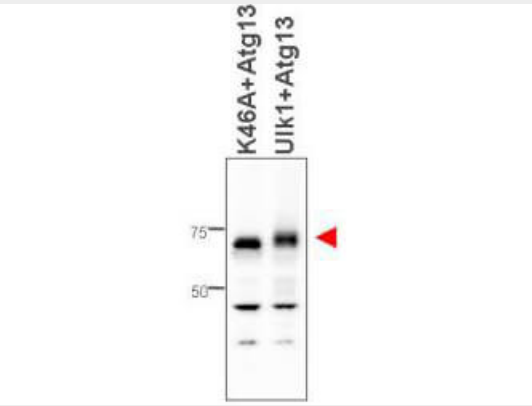
Cellular Location
Cytoplasm, cytosol. Preautophagosomal structure. Note=Under starvation conditions, is localized to puncate structures primarily representing the isolation membrane; the isolation membrane sequesters a portion of the cytoplasm resulting in autophagosome formation

Anti-ATG13 (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-ATG13 (RABBIT) Antibody - Images



Western blot using Rockland's affinity purified anti-ATG13 antibody shows detection of ATG13 in 293T cells engineered to coexpress Ulk1 and Atg13 (Ulk1 + Atg13), right lane, but not in the left lane in which was loaded kinase-dead hypophosphorylated Ulk1-K46A mutant + ATG13. Detection is demonstrated at approximately 57 kDa. The antibody was purified and resolved by SDS-PAGE,

then transferred to nitrocellulose membrane. The membrane was blocked with 5% Blotto (p/n B501-0500) and probed with the primary antibody at 1 µg/mL overnight at 4°C. After washing, the membrane was probed with Goat Anti-Rabbit HRP secondary 1:5000 in detection buffer (p/n MB-070) for 45 minutes at room temperature. In collaboration with Charles Dorsey at Eli Lilly, Indianapolis, IN and John Cleveland at Scripps, Jupiter, FL.

Anti-ATG13 (RABBIT) Antibody - Background

ATG13 is a target of the TOR kinase signaling pathway that regulates autophagy through the control of the phosphorylation status of ATG13 and ULK1 through their stable complex, and the regulation of ATG13-ULK1-RB1CC1. ATG13 also forms a stable complex with FIP200. Ulk1 phosphorylates ATG13 on S318 and promotes its release to damaged mitochondria. Autophagy is a normal process in eukaryotes required for turnover of cellular components during starvation and stress. It plays an essential role in cellular differentiation, cell death and aging. Defects in this evolutionarily conserved process may contribute to certain human diseases such as cancer, neurodegenerative diseases, muscular disorders and pathogen infections. ATG13 is one of several ATG genes required for autophagosome formation in mammalian cells. mTOR interacts with this complex in a nutrient dependent manner and phosphorylates Atg13 and ULK1.