

Datasheet for 600-401-C50S**ATG13 Antibody****Overview**

Description:	Anti-ATG13 (RABBIT) Antibody - 600-401-C50S
Item No.:	600-401-C50S
Size:	25 µL
Applications:	ELISA, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

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.
Synonyms:	rabbit anti-ATG13 Antibody, ATG-13, ATG 13, Autophagy-related protein 13, KIAA0652
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	ATG13
Reactivity:	Human
Immunogen Type:	Conjugated Peptide

Immunogen:	This affinity purified antibody was prepared by repeated immunizations with a synthetic peptide corresponding to the S318 region of ATG13.
Purity/Specificity:	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.
Relevant Links:	• UniProtKB - O75143 • NCBI - NP_001136145.1 • GenelD - 9776

Application Details

Tested Applications:	ELISA, WB
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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:220,000-1:250,000
WB:	1:1000

Formulation

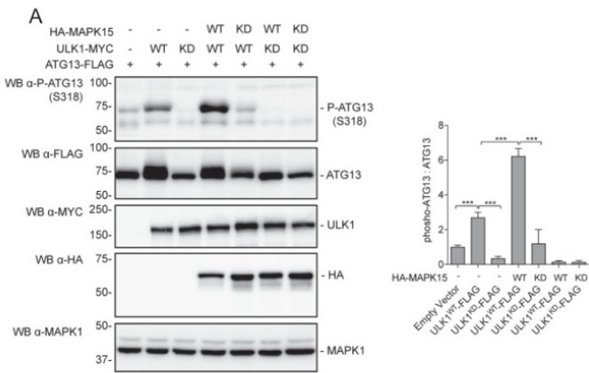
Physical State:	Liquid (sterile filtered)
Concentration:	1.24 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
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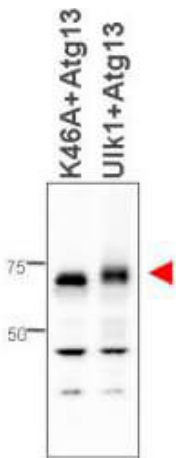
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is three (3) months from date of receipt.

Images



Western Blot

MAPK15 activates ULK1. A, HeLa cells were transfected with plasmid encoding for ATG13-FLAG in combination with HA-MAPK15WT, HA-MAPK15KD, ULK1WT-MYC, ULK1KD-MYC, or the empty vector. After 24 h, total lysates were analyzed by Western blot (WB) analysis (left panel). ATG13 was analyzed for phosphorylation levels [anti-phospho-ATG13 Ser318 (p/n, 600-401-C49); anti-ATG13 (p/n, 600-401-C50)], and scores were plotted on the graph (right panel, n = 3). Fig 2. PMID: 30131341



Western Blot

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 1µg/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.

References

- Cong Y et al. Influenza A virus subverts the LC3-pericentrin dynein adaptor complex for host cytoplasm entry. *Sci Adv.* (2025)
- Colecchia D et al. MAPK15 is part of the ULK complex and controls its activity to regulate early phases of the autophagic process. *J Biol Chem.* (2018)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.