

Datasheet for ABIN964567

anti-ATG13 antibody**1** Image**3** Publications[Go to Product page](#)

Overview

Quantity:	100 µg
Target:	ATG13
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Application:	Western Blotting (WB), ELISA

Product Details

Purpose:	ATG13 Antibody
Immunogen:	Immunogen: This affinity purified antibody was prepared by repeated immunizations with a synthetic peptide corresponding to the S318 region of ATG13. Immunogen Type: Conjugated Peptide
Isotype:	IgG
Cross-Reactivity (Details):	This affinity-purified antibody is directed against human ATG13 protein.
Characteristics:	Synonyms: rabbit anti-ATG13 Antibody, ATG-13, ATG 13, Autophagy-related protein 13, KIAA0652
Purification:	The product was affinity purified from monospecific antiserum by immunoaffinity purification.
Sterility:	Sterile filtered

Target Details

Target:	ATG13
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Target Details

Alternative Name: [ATG13 \(ATG13 Products\)](#)

Background: 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.

Gene ID: 9776

NCBI Accession: [NP_001136145](#)

UniProt: [O75143](#)

Pathways: [PI3K-Akt Signaling, Autophagy](#)

Application Details

Application Notes: 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.

Western Blot Dilution: 1:1000

ELISA Dilution: 1:220,000-1:250,000

Other: User Optimized

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 1.24 mg/mL

Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Stabilizer: None

Handling

Preservative: 0.01 % (w/v) Sodium Azide

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: 4 °C, -20 °C

Storage Comment: 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.

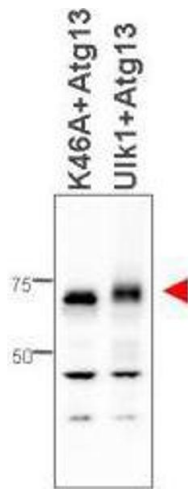
Expiry Date: 12 months

Publications

Product cited in: Stanton, Dutta, Zhang, Polavaram, Leontovich, Hönscheid, Sinicrope, Tindall, Muders, Datta: "Autophagy control by the VEGF-C/NRP-2 axis in cancer and its implication for treatment resistance." in: **Cancer research**, Vol. 73, Issue 1, pp. 160-71, (2013) ([PubMed](#)).

Nazio, Strappazon, Antonioli, Bielli, Cianfanelli, Bordi, Gretzmeier, Dengjel, Piacentini, Fimia, Cecconi: "mTOR inhibits autophagy by controlling ULK1 ubiquitylation, self-association and function through AMBRA1 and TRAF6." in: **Nature cell biology**, Vol. 15, Issue 4, pp. 406-16, (2013) ([PubMed](#)).

Joo, Dorsey, Joshi, Hennessy-Walters, Rose, McCastlain, Zhang, Iyengar, Jung, Suen, Steeves, Yang, Prater, Kim, Thompson, Youle, Ney, Cleveland, Kundu: "Hsp90-Cdc37 chaperone complex regulates Ulk1- and Atg13-mediated mitophagy." in: **Molecular cell**, Vol. 43, Issue 4, pp. 572-85, (2011) ([PubMed](#)).



Western Blotting

Image 1. Western blot using 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 and probed with the primary antibody at 1 μ g/mL overnight at 4°C. After washing, the membrane was probed with Goat Anti-Rabbit HRP secondary 1:5000 in detection buffer for 45 minutes at room temperature. In collaboration with Charles Dorsey at Eli Lilly, Indianapolis, IN and John Cleveland at Scripps, Jupiter, FL.