Datasheet for ABIN964569

anti-ATG13 antibody (Internal Region, pSer318)

1 Image | 20 Publications

Go to Product page

Overview

Quantity:	100 µg
Target:	ATG13
Binding Specificity:	Internal Region, pSer318
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This ATG13 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA

Product Details

Immunogen:	This affinity purified antibody was prepared by repeated immunizations with a synthetic peptide corresponding to the region near S318 of ATG13. Immunogen Type: Peptide
Isotype:	IgG
Specificity:	This affinity-purified antibody is directed against the phosphorylated form of human ATG13 protein at the pS318 residue. The product was affinity purified from monospecific antiserum by immunoaffinity purification. Antiserum was first purified against the phosphorylated form of the immunizing peptide. The resultant affinity purified antibody was then cross adsorbed against the non-phosphorylated form of the immunizing peptide. Reactivity occurs against human ATG13 pS318 protein and the antibody is specific for the phosphorylated form of the protein. Reactivity with non-phosphorylated human ATG13 is minimal by ELISA and western blot. A BLAST analysis was used to suggest cross reactivity with ATG13 from human based on

Product Details

	100% sequence homology with the immunogen. Reactivity against homologues from other sources is not known.
Characteristics:	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.
Purification:	affinity purified
Sterility:	Sterile filtered

Target Details

Target:	ATG13
Alternative Name:	ATG13 (ATG13 Products)
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: Autophagy-related protein 13, KIAA0652
Gene ID:	9776
NCBI Accession:	NP_001136145

Target Details

UniProt:	O75143
Pathways:	PI3K-Akt Signaling, Autophagy

Application Details

Application Notes:	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 phosphorylated ATG13 protein by western blotting in the appropriate stimulated tissue or cell lysate or extract.
Comment:	Gene Name: ATG13
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
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 4 °C prior to restoration. For extended storage aliquot contents and freeze at -20 °C or below. 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. Expiration date is one (1) year from date of opening.
Expiry Date:	12 months

Publications

Product cited in:	Ercan, Han, Di Nardo, Winden, Han, Hoyo, Saffari, Leask, Geschwind, Sahin: "Neuronal CTGF/CCN2 negatively regulates myelination in a mouse model of tuberous sclerosis complex. " in: **The Journal of experimental medicine**, Vol. 214, Issue 3, pp. 681-697, (2017) (PubMed). Ko, Ko, Shieh, Chi, Chen, Chen, Yu, Yang, Chang: "Advanced glycation end products influence

Publications

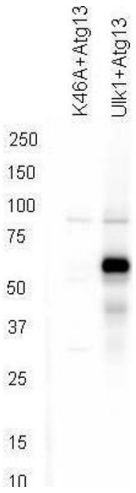
oral cancer cell survival via Bcl-xl and Nrf-2 regulation in vitro." in: **Oncology letters**, Vol. 13, Issue 5, pp. 3328-3334, (2017) (PubMed).

van der Hoorn, de Haan, Berbée, Havekes, Jukema, Rensen, Princen: "Niacin increases HDL by reducing hepatic expression and plasma levels of cholesteryl ester transfer protein in APOE*3Leiden.CETP mice." in: **Arteriosclerosis, thrombosis, and vascular biology**, Vol. 28, Issue 11, pp. 2016-22, (2008) (PubMed).

van der Hoogt, de Haan, Westerterp, Hoekstra, Dallinga-Thie, Romijn, Princen, Jukema, Havekes, Rensen: "Fenofibrate increases HDL-cholesterol by reducing cholesteryl ester transfer protein expression." in: **Journal of lipid research**, Vol. 48, Issue 8, pp. 1763-71, (2007) (PubMed).

There are more publications referencing this product on: Product page

Images



Western Blotting

Image 1. Western blot using affinity purified anti-ATG13 pS318 antibody shows detection of phosphorylated ATG13 in 293T cells engineered to coexpress Ulk1 and Atg13 (Ulk1 + Atg13). In the left lane was loaded kinase-dead hypophosphorylated Ulk1-K46A mutant + ATG13. The right lane contains the 293T Ulk1 + ATG13 lysate and shows detection 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 1µg/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.