ARG55112
anti-ATG13 antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes ATG13
Tested Reactivity	Hu, Ms, Rat
Tested Application	ELISA, ICC/IF, IHC-P, WB
Specificity	Multiple isoforms of ATG13 are known to exist.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	ATG13
Species	Human
Immunogen	Synthetic peptide (15 aa) within aa. 450-500 of Human ATG13 protein.
Conjugation	Un-conjugated
Alternate Names	KIAA0652; Autophagy-related protein 13; PARATARG8

Application Instructions

Application table

Application	Dilution
ELISA	Assay-dependent
ICC/IF	20 µg/ml
IHC-P	Assay-dependent
WB	1 µg/ml

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	Rat Heart Tissue Lysate
Observed Size	~ 49 kDa

Properties

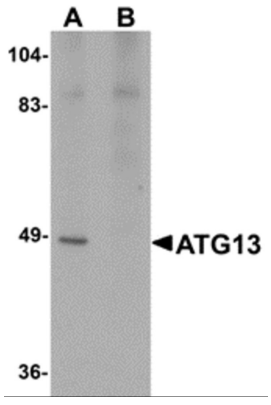
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS and 0.02% Sodium azide
Preservative	0.02% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot

	and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

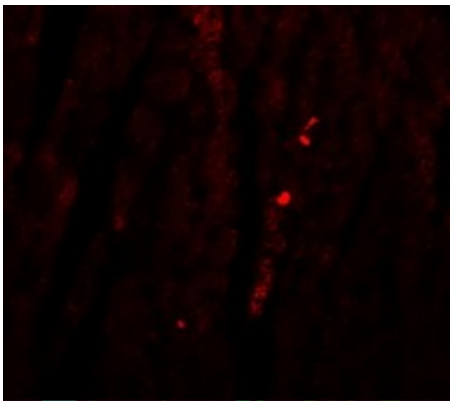
Database links	GeneID: 51897 Mouse GeneID: 9776 Human Swiss-port # O75143 Human Swiss-port # Q91YI1 Mouse
Gene Symbol	ATG13
Gene Full Name	autophagy related 13
Background	ATG13 Antibody: Autophagy, the process of bulk degradation of cellular proteins through an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tumor cells. It is involved in the preservation of cellular nutrients under starvation conditions as well as the normal turnover of cytosolic components. This process is negatively regulated by TOR (Target of rapamycin) through phosphorylation of autophagy protein ATG1. ATG13 forms a complex with ULK1 and ULK2, the mammalian homologs of ATG1, and with FIP200. This complex is a target of TOR phosphorylation under normal conditions; inhibition of TOR by rapamycin or leucine deprivation leads to dephosphorylation of ATG13, ULK1 and ULK2, which then leads to autophagy. Knockdown of ATG13 inhibits autophagosome formation.
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. [UniProt]
Research Area	Cancer antibody; Cell Death antibody; Metabolism antibody
Calculated Mw	57 kDa
PTM	Phosphorylated by ULK1, ULK2 and mTOR. Phosphorylation status depends on nutrient-rich conditions; dephosphorylated during starvation or following treatment with rapamycin. ULK1-mediated phosphorylation of ATG13 at Ser-355 is required for efficient clearance of depolarized mitochondria.

Images



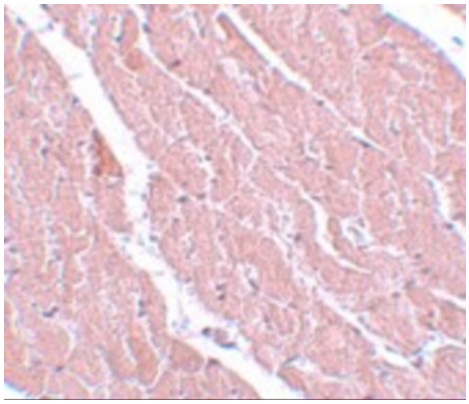
ARG55112 anti-ATG13 antibody WB image

Western blot: rat heart tissue lysate stained with ARG55112 anti-ATG13 antibody at 1 ug/ml dilution in (A) the absence and (B) the presence of blocking peptide.



ARG55112 anti-ATG13 antibody IHC image

Immunohistochemistry: ATG13 in Mouse Heart tissue stained with ARG55112 anti-ATG13 antibody at 20 ug/ml dilution.



ARG55112 anti-ATG13 antibody IHC image

Immunohistochemistry: ATG13 in mouse heart stained with ARG55112 anti-ATG13 antibody at 5 ug/ml dilution.