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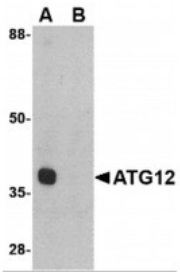
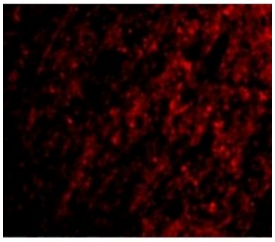
ATG12 Antibody

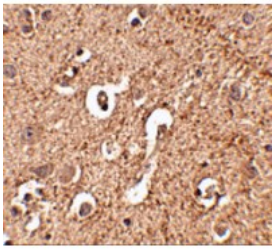
CATALOG NUMBER: 4423



Western blot analysis of ATG12 in mouse heart tissue lysate with ATG12 antibody at 1 ug/mL in (A) the absence and (B) the presence of blocking peptide.



Immunofluorescence of ATG12 in Human Brain cells with ATG12 antibody at 20 ug/mL.



Immunohistochemistry of ATG12 in human brain tissue with ATG12 antibody at 2.5 ug/mL.

Specifications

SPECIES REACTIVITY:	Human, Mouse, Rat
HOMOLOGY:	Predicted species reactivity based on immunogen sequence: Bovine: (86%)
TESTED APPLICATIONS:	ELISA, IF, IHC-P, WB
APPLICATIONS:	ATG12 antibody can be used for the detection of ATG10 by Western blot at 0.5 - 1 ug/mL. Antibody can also be used for immunohistochemistry starting at 2.5 ug/mL. For immunofluorescence start at 20 ug/mL.
USER NOTE:	Optimal dilutions for each application to be determined by the researcher.
POSITIVE CONTROL:	1) Cat. No. 1401 - Mouse Heart Tissue Lysate
IMMUNOGEN:	ATG12 antibody was raised against a 15 amino acid synthetic peptide from near the center of human ATG12. The immunogen is located within the first 50 amino acids of ATG12.
HOST SPECIES:	Rabbit

Properties

PURIFICATION:	ATG12 Antibody is affinity chromatography purified via peptide column.
PHYSICAL STATE:	Liquid
BUFFER:	ATG12 Antibody is supplied in PBS containing 0.02% sodium azide.
CONCENTRATION:	1 mg/mL
STORAGE CONDITIONS:	ATG12 antibody can be stored at 4˚C for three months and -20˚C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
CLONALITY:	Polyclonal
ISOTYPE:	IgG
CONJUGATE:	Unconjugated

Additional Info

ALTERNATE NAMES:	ATG12 Antibody: APG12, FBR93, APG12L, HAPG12, APG12, Ubiquitin-like protein ATG12, Autophagy-related

	protein 12, APG12-like
ACCESSION NO.:	EAW48955
PROTEIN GI NO.:	119569340
OFFICIAL SYMBOL:	ATG12
GENE ID:	9140

Background

BACKGROUND:	ATG12 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 APG1. ATG12, another member of the autophagy protein family, forms a conjugate with ATG5; this conjugate has a ubiquitin-protein ligase (E3)-like activity for protein lipidation in autophagy. This conjugate also associates with innate immune response proteins such as RIG-I and VISA (also known as IPS-1), inhibiting type I interferon production and permitting viral replication in host cells. ATG12 has also been shown to interact with ATG10 in human embryonic kidney cells in the presence of ATG7. At least two isoforms of ATG12 are known to exist.
REFERENCES:	1) Gozuacik D and Kimchi A. Autophagy as a cell death and tumor suppressor mechanism. Oncogene2004; 23:2891-906.
	2) Kisen GO, Tessitore L, Costelli P, et al. Reduced autophagic activity in primary rat hepatocellular carcinoma and ascites hepatoma cells. Carcinogenesis1993; 14:2501-5.
	3) Kamada Y, Funakoshi T, Shintani T, et al. Tor-mediated induction of autophagy via Apg1 protein kinase complex. J. Cell. Biol.2000; 150:1507-13.
	4) Hanada T, Noda NN, Satomi Y, et al. The Atg12-Atg5 conjugate has a novel E3-like activity for protein lipidation in autophagy. J. Biol. Chem.2007; 282:37298-302.

FOR RESEARCH USE ONLY

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