10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

APG12/ATG12 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10706

Specification

APG12/ATG12 Antibody - Product Information

Application	**WB**
Primary Accession	Q9CQY1
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**15207**

APG12/ATG12 Antibody - Additional Information

Gene ID 67526

Application & Usage: **Western blotting (0.5-4 µg/ml). However, the optimal conditions should be determined individually.**

Other Names
APG12 , APG12L , ATG12 , HAPG12

Target/Specificity
APG12/ATG12

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
0.5 mg/ml affinity purified rabbit anti-APG12 in PBS containing 30% glycerol, 0.5 mg/ml BSA and 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
APG12/ATG12 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

APG12/ATG12 Antibody - Protein Information

Name Atg12 {ECO:0000312|MGI:MGI:1914776}

Synonyms Apg12, Apg12l

Function
Ubiquitin-like protein involved in autophagy vesicles formation. Conjugation with ATG5 through a ubiquitin-like conjugating system involving also ATG7 as an E1-like activating enzyme and ATG10 as an E2-like conjugating enzyme, is essential for its function. The ATG12-ATG5 conjugate acts as an E3-like enzyme which is required for lipidation of ATG8 family proteins and their association to the vesicle membranes. As part of the ATG8 conjugation system with ATG5 and ATG16L1, required for recruitment of LRRK2 to stressed lysosomes and induction of LRRK2 kinase activity in response to lysosomal stress (PubMed:38227290).

Cellular Location
Cytoplasm. Preautophagosomal structure membrane {ECO:0000250|UniProtKB:O94817}; Peripheral membrane protein {ECO:0000250|UniProtKB:O94817}. Note=TECPR1 recruits the ATG12- ATG5 conjugate to the autolysosomal membrane {ECO:0000250|UniProtKB:O94817}

Tissue Location
Ubiquitous.

APG12/ATG12 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

APG12/ATG12 Antibody - Images

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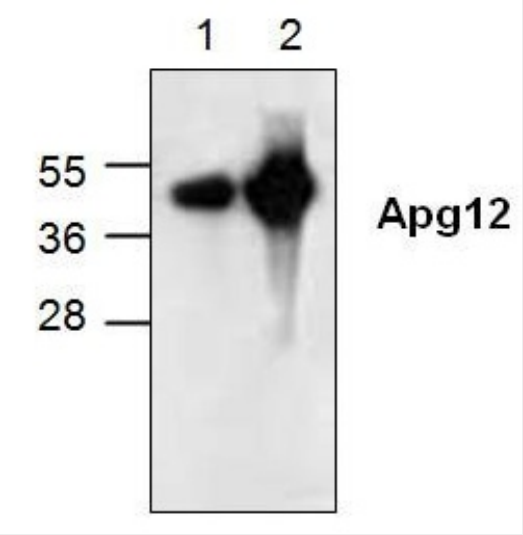

Western blot analysis of Apg12 in 3T3 cell lysate (Lane 1) and rat kidney tissue lysate (Lane 2).

APG12/ATG12 Antibody - Background

Autophagy, the process of bulk degradation of cellular proteins thro µgh 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) thro µgh phosphorylation of autophagy protein APG1. ATG12, another member of the autophagy protein family, forms a conj µgate with ATG5; this conj µgate has a ubiquitin-protein ligase (E3)-like activity for protein lipidation in autophagy. This conj µgate 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.

APG12/ATG12 Antibody - Citations

- A novel histone deacetylase inhibitor TMU-35435 enhances etoposide cytotoxicity through the proteasomal degradation of DNA-PKcs in triple-negative breast cancer.