

ATG12 Polyclonal Antibody

Catalog Number36-6400

Product data sheet

Details		Species Reactivity	
Size	100 µg	Species reactivity	Human, Mouse
Host/Isotope	Rabbit / IgG	Published species	Non-human primate, Human, Mouse, Not Applicable
Class	Polyclonal		
Type	Antibody	Tested Applications	Dilution *
Immunogen	Synthetic peptide derived from the internal region of the human Apg12 protein. This sequence differs from the mouse sequence by one amino acid.	ELISA (ELISA)	Assay-dependent
		Western Blot (WB)	1:500
Conjugate	Unconjugated	Published Applications	
Form	Liquid	Western Blot (WB)	See 2 publications below
Concentration	0.25 mg/mL	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Purification	Antigen affinity chromatography		
Storage buffer	PBS, pH 7.4		
Contains	0.1% sodium azide		
Storage Conditions	-20°C		

Background/Target Information

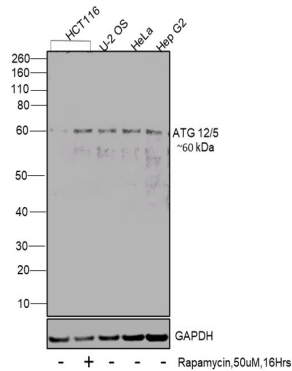
ATG12, a member of the autophagy protein family, forms a conjugate with ATG5; this conjugate has a ubiquitin-protein ligase (E3)-like activity for protein lipidation in autophagy. This conjugate also associates with innate immune response proteins such as RIG-I and VISA (also known as IPS-1), inhibiting 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. 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.

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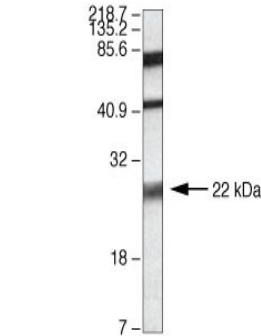
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ATG12 Antibody (36-6400) in WB

Western blot was performed using Anti-ATG12 Polyclonal Antibody (Product # 36-6400) and a 60kDa band corresponding to ATG12 was observed across cell lines tested. Membrane enriched extracts (30 µg lysate) of HCT 116 (Lane 1), HCT 116 treated with rapamycin (50uM, 16 Hrs) (Lane 2), U-2 OS (Lane 3), HeLa (Lane 4), Hep G2 (Lane 5) were electrophoresed using NuPAGE™ 4-12% Bis-Tris Protein Gel (Product # NP0321BOX). Resolved proteins were then transferred onto a Nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:500 Dilution) and detected by chemiluminescence with Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A27036, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005). ATG12 gets conjugated with ATG5. Expression of ATG12/5 is upregulated upon treatment with rapamycin in HCT116 cells.



ATG12 Antibody (36-6400) in WB

Western blot analysis of Apg12-transfected 293 cells using Rb anti-Apg12 (Product # 36-6400).

Western blot analysis of Apg12-transfected 293 cells using Rb anti-Apg12 (Cat. no. 36-6400).

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PubMed References For ATG12 Polyclonal Antibody

2 Western Blot References

Species / Dilution	Summary
	36-6400 was used in western blot to screen for small-molecule modulators of mammalian autophagy
Not Applicable / Not Cited	Nature chemical biology (2007; 3: 331) "Small molecules enhance autophagy and reduce toxicity in Huntington's disease models." Author(s):Sarkar S,Perlstein EO,Imarisio S,Pineau S,Cordenier A,Maglathlin RL,Webster JA,Lewis TA,O'Kane CJ, Schreiber SL,Rubinsztein DC PubMed Article URL: http://dx.doi.org/10.1038/nchembio883
Non-human primate / Not Cited	The Journal of biological chemistry (2007; 282: 5641) "Trehalose, a novel mTOR-independent autophagy enhancer, accelerates the clearance of mutant huntingtin and alpha-synuclein."
Human / Not Cited	Author(s):Sarkar S,Davies JE,Huang Z,Tunnacliffe A,Rubinsztein DC
Mouse / Not Cited	PubMed Article URL: http://dx.doi.org/10.1074/jbc.M609532200

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