



Qty: 100µg/400 µL

Rabbit anti-Apg12

Catalog No. 36-6400

Lot No.

Rabbit anti-Apg12

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.311

IMMUNOGEN

Synthetic peptide derived from the internal region of the human Apg12 protein. This sequence differs from the mouse sequence by one amino acid.

SPECIFICITY

This antibody reacts with the human Apg12 protein. On Western blots, it identifies the target band at ~22 kDa, as well as additional bands between 40 and 80 kDa of unknown origin.

REACTIVITY

Reactivity has been confirmed with Apg12-transfected, overexpressed HEK293 cell lysates. Based on amino acid sequence homology, cross-reactivity with mouse Apg12 may be observed.

Sample	Western Blotting	ELISA	Immuno-precipitation (native)
Human	++	ND	+
Mouse	ND	ND	ND
Immunogen	N/A	+++	N/A

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.1 – 1.0 µg/mL
Western Blotting: 1-3 µg/mL
Immunoprecipitation: 7 µg/reaction

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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PI366400

(Rev 10/08) DCC-08-1089

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BACKGROUND

Autophagy is the major pathway for proteins and organelles being delivered to the lysosome or vacuole for degradation. Autophagy-mediated degradation may be important during mammalian embryogenesis, differentiation, aging, and non-apoptotic programmed cell death.¹ Dysfunction in autophagic degradation has been observed in a number of genetic diseases, particularly in cancer,² and may also be associated with neurodegenerative conditions such as Parkinson's and Alzheimer's disease.³⁻⁴

The Apg12 system is a ubiquitin-like protein conjugation system, first discovered in autophagy-defective yeast mutants, that is conserved in eukaryotes.⁵ Covalent attachment of Apg12-Apg5 is required for autophagy; the Apg7 and Apg10 enzymes that catalyze this attachment are analogous to the E1 and E2 enzymes of the ubiquitin-proteasome degradation pathway.⁶

REFERENCES

1. Kim J, et al. *J Biol Chem* 277(1):763-773, 2002.
2. Liang XH, et al. *Nature* 402:672-676, 1999.
3. Cataldo AM, et al. *Neuron* 14:671-680, 1995.
4. Anglade P, et al. *Histol Histopathol* 12:25-31, 1997.
5. Mizushima N, et al. *Int J Biochem Cell Biol* 35(5):553-561, 2003.
6. Mizushima N, et al. *J Biol Chem* 273(51):33889-33892, 1998.

RELATED PRODUCTS

Product	Clone/PAD*	Cat. No.
Mouse anti-Ubiquitin	Ubi-1	13-1600
Mouse anti-GMP-1 (SUMO-1)	21C7	33-2400
Rabbit anti-Sentrin-2	NRD.1	51-9100
Rabbit anti-NEDD8	Z32.HJ	34-1400
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

*PAD: Polyclonal Antibody Designation

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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