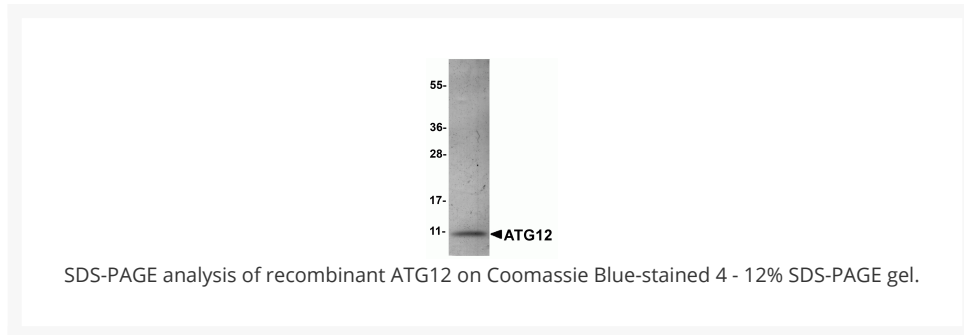




# ATG12 Recombinant Protein

Cat. No.: 95-125



## Ψ Specifications

|                                    |   |
|------------------------------------|---|
| <b>SPECIES:</b>                    | Mouse   |
| <b>SOURCE SPECIES:</b>             | E. coli   |
| <b>SEQUENCE:</b>                   | aa 101 - 141  |
| <b>FUSION TAG:</b>                 | <b>Fusion Partner:</b> C-terminal His-tag                                     |
| <b>TESTED APPLICATIONS:</b>        | ELISA, WB   |
| <b>APPLICATIONS:</b>               | This recombinant protein can be used for WB and ELISA. For research use only. |
| <b>PREDICTED MOLECULAR WEIGHT:</b> | 10 kDa (Calculated)   |

## Ψ Properties

|                            |  |
|----------------------------|--|
| <b>PURITY:</b>             | ~95%   |
| <b>PHYSICAL STATE:</b>     | Liquid   |
| <b>BUFFER:</b>             | 1X PBS containing 0.1% SDS   |
| <b>STORAGE CONDITIONS:</b> | Store in working aliquots at -70 °C. Avoid freeze/thaw cycles. When working with proteins care should be taken to keep recombinant protein at a cool and stable temperature. |

|                         |   |
|-------------------------|---|
| <b>OFFICIAL SYMBOL:</b> | ATG12   |
| <b>ALTERNATE NAMES:</b> | ATG12 Antibody: APG12, FBR93, APG12L, HAPG12, APG12, Ubiquitin-like protein ATG12, Autophagy-related protein 12, APG12-like |
| <b>ACCESSION NO.:</b>   | Q9CQY1  |
| <b>PROTEIN GI NO.:</b>  | 17366729  |
| <b>GENE ID:</b>         | 9140  |

## Background and References

|                    |   |
|--------------------|---|
| <b>BACKGROUND:</b> | 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 (1,2). This process is negatively regulated by TOR (Target of rapamycin) through phosphorylation of autophagy protein APG1 (3). 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 (4). 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 (5). ATG12 has also been shown to interact with ATG10 in human embryonic kidney cells in the presence of ATG7 (6). |
| <b>REFERENCES:</b> | 1) Gozuacik D and Kimchi A. Autophagy as a cell death and tumor suppressor mechanism. <i>Oncogene</i> . 2004; 23:2891-906.  |
|                    | 2) Kisen GO, Tessitore L, Costelli P, et al. Reduced autophagic activity in primary rat hepatocellular carcinoma and ascites hepatoma cells. <i>Carcinogenesis</i> 1993; 14:2501-5.   |
|                    | 3) Kamada Y, Funakoshi T, Shintani T, et al. Tor-mediated induction of autophagy via Apg1 protein kinase complex. <i>J. Cell. Biol.</i> 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. <i>J. Biol. Chem.</i> 2007; 282:37298-302.  |

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