

Recombinant Mouse Atg3 Protein, Myc/DDK-tagged

Cat. No. Atg3-1759M Lot. No. (See product label)

SPECIFICATION

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| Product Overview | Purified recombinant protein of mouse full-length autophagy related 3 (Atg3), with C-terminal MYC/DDK tag, expressed in HEK293T cells. |
| Species | Mouse |
| Source | HEK293 |
| Description | <p>E2 conjugating enzyme required for the cytoplasm to vacuole transport (Cvt), autophagy, and mitochondrial homeostasis. Responsible for the E2-like covalent binding of phosphatidylethanolamine to the C-terminal Gly of ATG8-like proteins (GABARAP, GABARAPL1, GABARAPL2 or MAP1LC3A). The ATG12-ATG5 conjugate plays a role of an E3 and promotes the transfer of ATG8-like proteins from ATG3 to phosphatidylethanolamine (PE). This step is required for the membrane association of ATG8-like proteins. The formation of the ATG8-phosphatidylethanolamine conjugates is essential for autophagy and for the cytoplasm to vacuole transport (Cvt). Preferred substrate is MAP1LC3A. Also acts as an autocatalytic E2-like enzyme, catalyzing the conjugation of ATG12 to itself, ATG12 conjugation to ATG3 playing a role in mitochondrial homeostasis but not in autophagy. ATG7 (E1-like enzyme) facilitates this reaction by forming an E1-E2 complex with ATG3. ATG12-ATG3 conjugate is also formed upon vaccinia virus infection, leading to the disruption the cellular autophagy which is not necessary for vaccinia survival and proliferation. Promotes primary ciliogenesis by removing OFD1 from centriolar satellites via the autophagic pathway.</p> |

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| Molecular Mass | 36.2 kDa |
| Purity | > 80% as determined by SDS-PAGE and Coomassie blue staining |
| Stability | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles. |
| Storage | Store at -80 centigrade after receiving vials. |
| Concentration | >50 µg/mL as determined by microplate BCA method |
| Storage Buffer | 25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol. |

GENE INFORMATION

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| Gene Name | Atg3 autophagy related 3 [Mus musculus (house mouse)] |
| Official Symbol | Atg3 |
| Synonyms | ATG3; autophagy-related 3 (yeast); ubiquitin-like-conjugating enzyme ATG3; autophagy-related protein 3; APG3; Apg3l; Atg3l; PC3-96; 2610016C12Rik |
| Gene ID | 67841 |
| mRNA Refseq | NM_026402 |
| Protein Refseq | NP_080678 |
| UniProt ID | Q9CPX6 |

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