

Recombinant Human Ubiquitin-like-conjugating enzyme ATG3(ATG3)

Catalog No: #AP70062

Package Size: #AP70062-1 20ug #AP70062-2 100ug #AP70062-3 1mg



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Description

Product Name	Recombinant Human Ubiquitin-like-conjugating enzyme ATG3(ATG3)
Host Species	E.coli
Purification	Greater than 90% as determined by SDS-PAGE.
Immunogen Description	Expression Region:1-314aaSequence Info:Full Length
Other Names	Autophagy-related protein 3 ;APG3-like ;hApg3;Protein PC3-96
Accession No.	Q9NT62
Calculated MW	51.9 kDa
Tag Info	N-terminal 6xHis-SUMO-tagged
Target Sequence	MQNVINTVKGKALEVAEYLT PVLKESKFKETGVITPEEFVAAGDHLVHHCTWQWATGEELKV KAYLPTGKQF LVTKNVP CYKRCKQMEYSDELEAII EDDGDGGWVDYHNTGITGITEAVKEITLENKDNIRLQDCSALCEEEE DEDEGEAADMEEYEESGLLETDEATLDTRKIVEACKAKTDAGGEDAILQTRTYDLYITYDKYYQTPRLWLFGY DEQRQPLTVEHMYEDISQDHVKKTVTIENHPLPPPPMCSVHPCRHA EVMKKIETVAEGGGELGVHMYLLIFL K FVQAVIPTIEYDYTRHFTM
Formulation	Tris-based buffer50% glycerol
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C,-80°C. The shelf life of lyophilized form is 12 months at -20°C,-80°C.Notes:Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Background

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 mbrane 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. Promotes primary ciliogenesis by roving OFD1 from centriolar satellites via the autophagic pathway.

References

Comparative large-scale characterisation of plant vs. mammal proteins reveals similar and idiosyncratic N-alpha acetylation features.Bienvenut W.V., Sumpton D., Martinez A., Lilla S., Espagne C., Meinne T., Giglione C.Mol. Cell. Proteomics 11:M111.015131-M111.015131(2012)Research Topic:Apoptosis

Note: This product is for in vitro research use only and is not intended for use in humans or animals.