



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

Product Code	CSB-EP002288HU
Relevance	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. Promotes primary ciliogenesis by moving OFD1 from centriolar satellites via the autophagic pathway.
Abbreviation	Recombinant Human ATG3 protein
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.
Uniprot No.	Q9NT62
Alias	Autophagy-related protein 3 ;APG3-like ;hApg3;Protein PC3-96
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	≥ 90% as determined by SDS-PAGE.
Sequence	MQNVINTVKGKALEVAEYLTPVLKESKFKETGVITPEEFVAAGDHLVHHCP TWQWATGEELKVKAYLPTGKQFLVTKNVPCYKRCKQMEYSDELEAIIIEEDDGDG GWVDTYHNTGITGITEAVKEITLENKDNIRLQDCSALCEEEDEDEGEAADMEE YEESSLLETDEATLDTRKIVEACKAKTDAGGEDAILQTRTYDLYITYDKYYQTP RLWLFGYDEQRQPLTVEHMYEDISQDHVKKTVTIENHPLPPPPMCSVHPCR HAEVMKKIIEETVAEGGGELGVHMYLLIFLKFVQAVIPTIEYDYTRHFTM
Research Area	Apoptosis
Source	E.coli
Target Names	ATG3
Expression Region	1-314aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

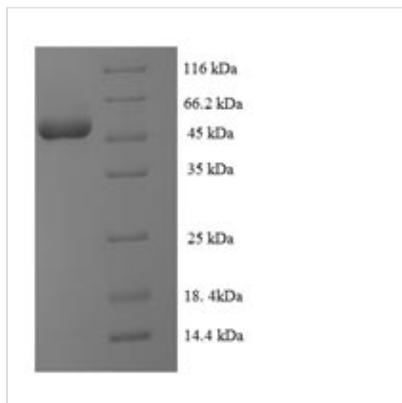


Tag Info N-terminal 6xHis-SUMO-tagged

Mol. Weight 51.9kDa

Protein Length Full Length

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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.