

# PRODUCT INFORMATION



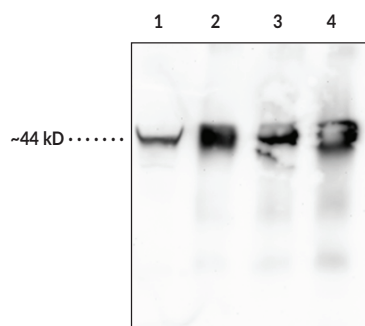
## ATG4B Monoclonal Antibody (Clone 8A5)

Item No. 25963

### Overview and Properties

<b>Contents:</b>	This vial contains 100 µg of protein G-purified monoclonal antibody.
<b>Synonyms:</b>	hAPG4B, AUT-like 1 Cysteine Endopeptidase, Autophagin-1, Autophagy-related Protein 4 Homolog B, Cysteine Protease ATG4B
<b>Immunogen:</b>	Full-length human recombinant ATG4B protein
<b>Cross Reactivity:</b>	(-) ATG8 recombinant protein
<b>Species Reactivity:</b>	(+) Human; other species not tested
<b>Uniprot No.:</b>	Q9Y4P1
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥3 years
<b>Storage Buffer:</b>	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
<b>Clone:</b>	8A5
<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG1
<b>Applications:</b>	ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP), and Western blot (WB); the recommended starting dilution for ELISA and WB is 1:1,000, 1:200 for IHC, and 5 µg per test for IP. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

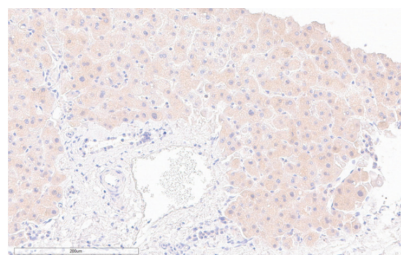
### Images



Lane 1: Raji Cell Lysate (50 µg)  
Lane 2: ATG4B Recombinant Protein (5 ng)  
Lane 3: ATG4B Recombinant Protein (10 ng)  
Lane 4: ATG4B Recombinant Protein (25 ng)



Immunohistochemistry analysis of formalin-fixed, paraffin-embedd (FFPE) human skeletal muscle after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with Prostaglandin ATG4B Monoclonal Antibody (Clone 8A5) (Item No. 25963) at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).



Immunohistochemistry analysis of formalin-fixed, paraffin-embedd (FFPE) human liver tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with Prostaglandin ATG4B Monoclonal Antibody (Clone 8A5) (Item No. 25963) at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/06/2023

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM

# PRODUCT INFORMATION



## Description

---

Autophagy-related 4B (ATG4B), also known as autophagin-1, is a cysteine protease and a member of the C54 protease family with dual roles in the progression of autophagy.<sup>1,2</sup> It catalyzes the irreversible proteolytic cleavage of human homologs of yeast Atg8 belonging to the microtubule-associated protein 1A/B-light chain 3 (MAP1LC3/LC3) and the GABA receptor-associated protein (GABARAP) subfamilies, including LC3, GATE16, GABARAP, and ATG8L, to expose a C-terminal glycine residue that is essential to formation of the autophagosome. It also catalyzes the reversible deconjugation of phosphatidylethanolamine from C-terminal glycine lipid-conjugated Atg8 homologs.<sup>3</sup> ATG4B expression is increased in CD34<sup>+</sup> chronic myeloid leukemia (CML) stem and progenitor cells and knockdown of ATG4B expression increases accumulation of LC3-II and p62, indicating impaired autophagy, and reduces the viability and inhibits proliferation of CD34<sup>+</sup> CML cells.<sup>4</sup> Atg4<sup>-/-</sup> mice exhibit systemic decreases in basal and induced autophagy as well as increased susceptibility to colitis induced by dextran sodium sulfate (DSS) and pulmonary fibrosis induced by bleomycin (Item No. 13877).<sup>5,6</sup> Cayman's ATG4B Monoclonal Antibody (Clone 8A5) can be used for Western blot and ELISA applications. The antibody recognizes ATG4B at approximately 44 kDa from human samples.

## References

---

1. Li, M., Hou, Y., Wang, J., *et al.* Kinetics comparisons of mammalian Atg4 homologues indicate selective preferences toward diverse Atg8 substrates. *J. Biol. Chem.* **286**(9), 7327-7338 (2011).
2. Yang, Z., Wilkie-Grantham, R.P., Yanagi, T., *et al.* ATG4B (Autophagin-1) phosphorylation modulates autophagy. *J. Biol. Chem.* **290**(44), 26549-26561 (2015).
3. Kabeya, Y., Mizushima, N., Yamamoto, A., *et al.* LC3, GABARAP and GATE16 localize to autophagosomal membrane depending on form-II formation. *J. Cell Sci.* **117**(Pt 13), 2805-2812 (2004).
4. Rothe, K., Lin, H., Lin, K.B., *et al.* The core autophagy protein ATG4B is a potential biomarker and therapeutic target in CML stem/progenitor cells. *Blood* **123**(23), 3622-3634 (2014).
5. Cabrera, S., Fernández, A.F., Mariño, G., *et al.* ATG4B/autophagin-1 regulates intestinal homeostasis and protects mice from experimental colitis. *Autophagy* **9**(8), 1188-1200 (2013).
6. Cabrera, S., Maciel, M., Herrera, I., *et al.* Essential role for the ATG4B protease and autophagy in bleomycin-induced pulmonary fibrosis. *Autophagy* **11**(4), 670-684 (2015).

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM