

## Product datasheet

# Anti-ATG12 antibody [EPR4800] - BSA and Azide free ab247876


KO VALIDATED

Recombinant

RabMAb

6 Images

### Overview

Product name	Anti-ATG12 antibody [EPR4800] - BSA and Azide free
Description	Rabbit monoclonal [EPR4800] to ATG12 - BSA and Azide free
Host species	Rabbit
Tested applications	<b>Suitable for:</b> IHC-P, WB <b>Unsuitable for:</b> Flow Cyt, ICC/IF or IP
Species reactivity	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
General notes	<p>ab247876 is the carrier-free version of <a href="#">ab109491</a>.</p> <p>Our <b>carrier-free</b> antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our <b>conjugation kits</b> for antibody conjugates that are ready-to-use in as little as 20 minutes with &lt;1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar<sup>®</sup> Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar<sup>®</sup> is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

## Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR4800
Isotype	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab247876 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

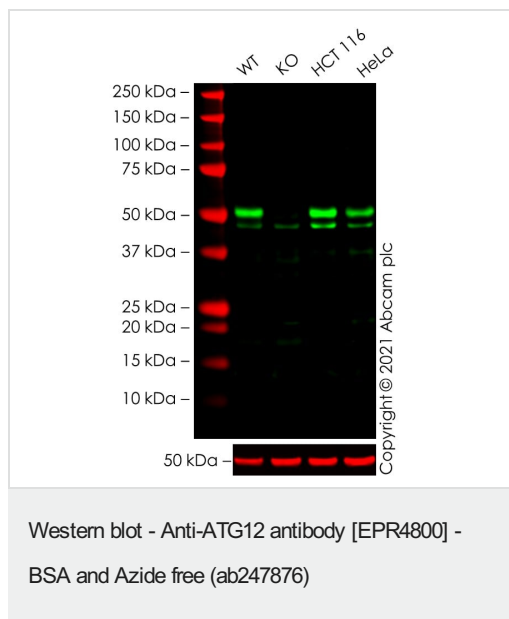
Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Predicted molecular weight: 15 kDa.

**Application notes** Is unsuitable for Flow Cyt, ICC/IF or IP.

## Target

Function	Ubiquitin-like protein required for autophagy. Conjugated to ATG3 and ATG5.
Tissue specificity	Ubiquitous.
Sequence similarities	Belongs to the ATG12 family.
Domain	Shares weak sequence similarity with ubiquitin family, but contains an 'ubiquitin superfold' and the C-terminal Gly is required for isopeptide linkage.
Cellular localization	Cytoplasm.

## Images



**All lanes** : Anti-ATG12 antibody [EPR4800] ([ab109491](#)) at 1/1000 dilution

**Lane 1** : Wild-type THP-1 cell lysate

**Lane 2** : ATG12 knockout THP-1 cell lysate

**Lane 3** : HCT 116 cell lysate

**Lane 4** : HeLa cell lysate

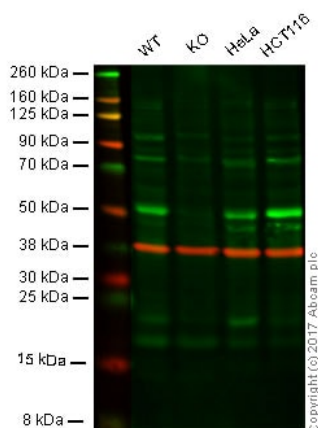
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size:** 15 kDa

**Observed band size:** 52 kDa

False colour image of Western blot: Anti-ATG12 antibody [EPR4800] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, [ab109491](#) was shown to bind specifically to ATG12. A band likely to be the unfunctional complex with ATG5 was observed at 52 kDa in wild-type THP-1 cell lysates with no signal observed at this size in Atg12 knockout cell line [ab277831](#) (knockout cell lysate [ab278183](#)) - unconjugated functional form not observed at 15 kDa. To generate this image, wild-type and Atg12 knockout THP-1 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween<sup>®</sup> 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye<sup>®</sup> 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye<sup>®</sup> 680RD) preabsorbed ([ab216776](#)) at 1/20000 dilution.



Western blot - Anti-ATG12 antibody [EPR4800] - BSA and Azide free (ab247876)

This data was developed using [ab109491](#), the same antibody clone in a different buffer formulation.

**Lane 1:** Wild-type HAP1 whole cell lysate (20 µg)

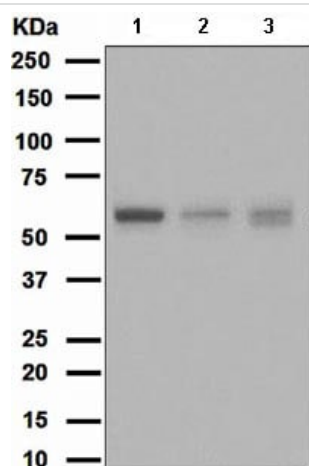
**Lane 2:** ATG12 knockout HAP1 whole cell lysate (20 µg)

**Lane 3:** HeLa whole cell lysate (20 µg)

**Lane 4:** HCT116 whole cell lysate (20 µg)

**Lanes 1 - 4:** Merged signal (red and green). Green - [ab109491](#) observed at 55 kDa. Observed band shows ATG12-ATG5 conjugation. Red - loading control, [ab8245](#), observed at 37 kDa.

Ab109491 was shown to specifically react with ATG12 in wild-type cells along with additional cross-reactive bands. The band was not seen in ATG12 knockout HAP1 cells. Wild-type and ATG12 knockout samples were subjected to SDS-PAGE. [ab109491](#) and [ab8245](#) (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed [ab216773](#) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed [ab216776](#) secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-ATG12 antibody [EPR4800] - BSA and Azide free (ab247876)

**All lanes :** Anti-ATG12 antibody [EPR4800] ([ab109491](#)) at 1/1000 dilution

**Lane 1 :** Human fetal kidney tissue lysate

**Lane 2 :** HepG2 cell lysate

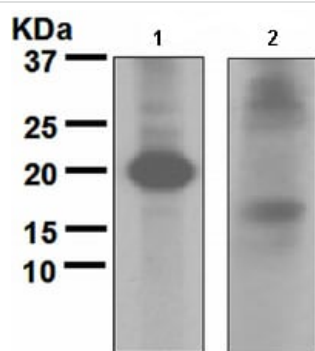
**Lane 3 :** Raji lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 15 kDa

This data was developed using [ab109491](#), the same antibody clone in a different buffer formulation.

Observed band shows ATG12-ATG5 conjugation.



Western blot - Anti-ATG12 antibody [EPR4800] - BSA and Azide free (ab247876)

**All lanes :** Anti-ATG12 antibody [EPR4800] (**ab109491**) at 1/1000 dilution

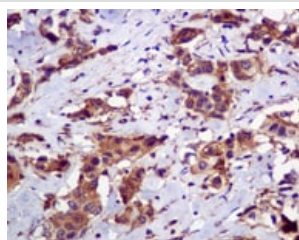
**Lane 1 :** ATG12 transfected 293T lysate

**Lane 2 :** Non-transfected 293T lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 15 kDa

This data was developed using **ab109491**, the same antibody clone in a different buffer formulation.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATG12 antibody [EPR4800] - BSA and Azide free (ab247876)

This data was developed using **ab109491**, the same antibody clone in a different buffer formulation. **ab109491**, at 1/250 dilution, staining ATG12 in paraffin-embedded Human breast carcinoma by Immunohistochemistry. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-ATG12 antibody [EPR4800] - BSA and Azide free (ab247876)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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