

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects human ATG12 in direct ELISAs, and human and mouse ATG12 in Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 628902
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human ATG12 Asp48-Ala187 Accession # O94817
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

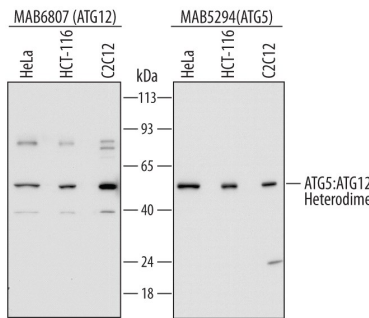
## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	0.1 µg/mL	See Below
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below

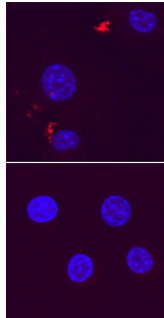
## DATA

**Western Blot**



**Detection of Human and Mouse ATG12 by Western Blot.** Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, HCT-116 human colorectal carcinoma cell line, and C2C12 mouse myoblast cell line. PVDF membrane (left) was probed with 0.1 µg/mL of Mouse Anti-Human ATG12 Monoclonal Antibody (Catalog # MAB6807) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). For additional reference, PVDF membrane (right) was probed with 0.5 µg/mL of Mouse Anti-Human/Mouse/Rat ATG5 Monoclonal Antibody (Catalog # MAB5294) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for the ATG5:ATG12 heterodimer at approximately 60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

**Immunocytochemistry**



**ATG12 in RAW 264.7 Mouse Cell Line.** ATG12 was detected in immersion fixed RAW 264.7 mouse monocyte/macrophage cell line untreated (lower panel) or stimulated with LPS (upper panel) using Mouse Anti-Human/Mouse ATG12 Monoclonal Antibody (Catalog # MAB6807) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to autophagosomes. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

ATG12 is a 15 kDa cytosolic protein with a C-terminal ubiquitin-like domain. The conjugation of ATG12 to ATG5 is required for the autophagosome pathway of bulk degradation. The ATG5:ATG12 heterodimer associates noncovalently with an ATG16 multimer to generate autophagosomes. The ATG5:ATG12 conjugate also inhibits type I interferon-induced antiviral responses and promotes the lipidation of ATG8. Alternate splicing of human ATG12 generates an isoform that lacks the ubiquitin-like domain. Human ATG12 shares 89% and 85% aa sequence identity with mouse and rat ATG12, respectively.