

## Product Information

The Autophagy Essentials Antibody Kit provides a cost-effective tool for studying key proteins involved in the autophagy pathway. Perfect for researchers starting a new project, screening multiple prospective targets or those who simply require less volume.

## Kit Components

The Autophagy Essentials Antibody Kit contains antibodies against 5 key protein targets playing critical roles in the autophagy pathway.

Antigen	Catalog No.	Host, clonality	Tested Reactivity	Applications	Volume
Beclin 1	<a href="#">66665-1-Ig</a>	Mouse monoclonal	H, M, R	WB, IHC, IF, ELISA	20 uL
LC3	<a href="#">81004-1-RR</a>	Rabbit monoclonal	H, M, R, Pg	WB, IHC, IF, ELISA	20 uL
p62	<a href="#">80294-1-RR</a>	Rabbit monoclonal	H	WB, IP, IHC, IF, ELISA	20 uL
ATG5	<a href="#">81803-1-RR</a>	Rabbit monoclonal	H, M, R	WB, IP, IHC, ELISA	20 uL
LAMP1	<a href="#">21997-1-AP</a>	Rabbit polyclonal	H	WB, IP, IHC, ELISA	20 uL

Also see our 'Autophagy Expanded Antibody Kit' on the following page  
<https://www.ptglab.com/products/Autophagy-Expanded-Antibody-Kit-PK30005.htm>

## Package

5 × 20 uL

## Storage

Store at -20°C. Stable for one year from the date of receipt.

## Background Information

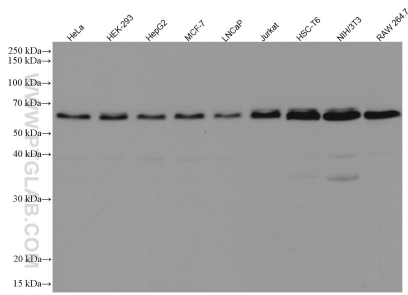
Autophagy is a highly dynamic process consisting of the following three steps: (1) autophagosome formation, (2) autophagosome-lysosome fusion, and (3) degradation. It can be induced by multiple signaling pathways related to various triggers including nutrient deprivation, growth factor signaling, and cellular stress. The process of autophagosome formation proceeds through the steps of initiation, nucleation, elongation, closure, and ultimately fusion, each of which is regulated by various ATG proteins.

The ideal approach for measuring autophagy is to assess autophagic flux, which represents the rate of degradation of the autophagic pathway. The most widely used method for measuring autophagic flux is to detect the processing of the autophagosomal membrane protein, LC3. Analyzing autophagy substrates such as p62/SQSTM1 is often recommended in addition to measuring LC3-II turnover for accurate assessment of autophagic flux. The fusion of autophagosomes with lysosomes can be monitored by analyzing the autophagosomal marker LC3 and the lysosomal marker, LAMP simultaneously.

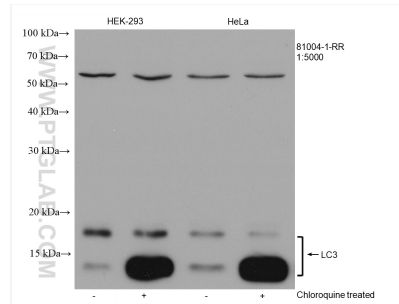
## Standard Protocols

Click [here](#) to view our standard protocols for various applications including WB, IP, IHC, IF, FC, and ELISA.

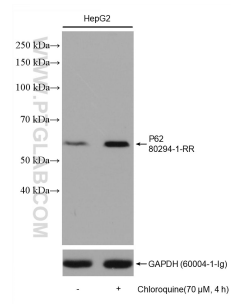
## Validation Data



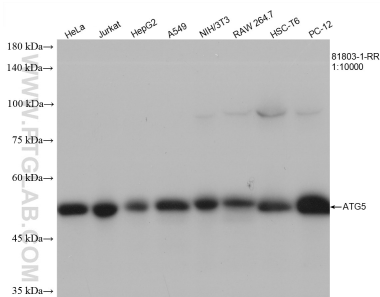
Various lysates were subjected to SDS PAGE followed by western blot with 66665-1-Ig (Beclin 1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



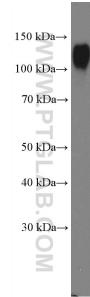
Untreated and chloroquine treated HEK-293 cells, untreated and chloroquine treated HeLa cells were subjected to SDS PAGE followed by western blot with 81004-1-RR (LC3 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



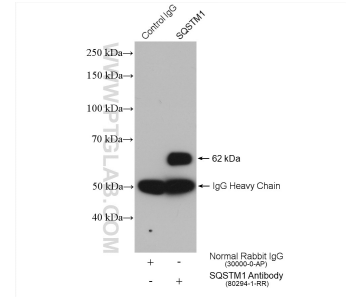
Lysates of HepG2 cells treated with Chloroquine or not were subjected to SDS PAGE followed by western blot with 80294-1-RR (P62, SQSTM1 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



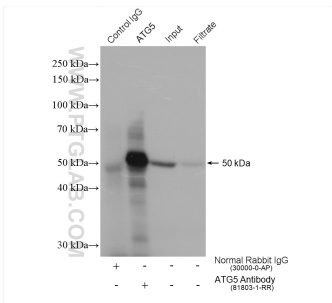
Various lysates were subjected to SDS PAGE followed by western blot with 81803-1-RR (ATG5 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



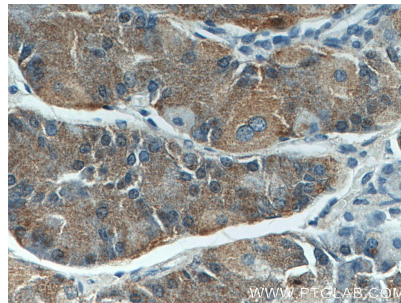
U-937 cells were subjected to SDS PAGE followed by western blot with 21997-1-AP (LAMP1 antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



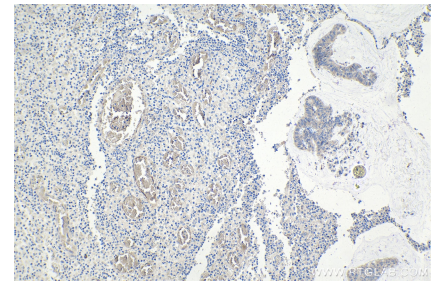
IP result of anti-P62, SQSTM1 (IP: 80294-1-RR, 4ug; Detection: 80294-1-RR 1:500) with HEK-293 cells lysate 1640 ug.



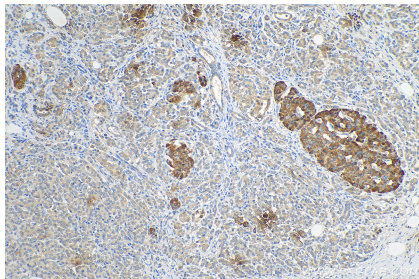
IP result of anti-ATG5 (IP: 81803-1-RR, 4ug; Detection: 81803-1-RR 1:2000) with HeLa cells lysate 1800 ug.



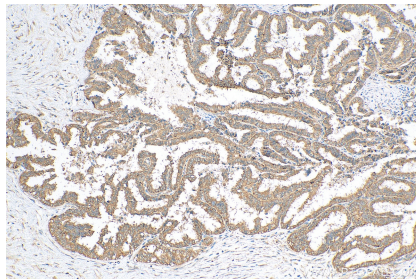
Immunohistochemical analysis of paraffin-embedded human stomach tissue slide using 66665-1-Ig (Beclin 1 antibody) at dilution of 1:500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



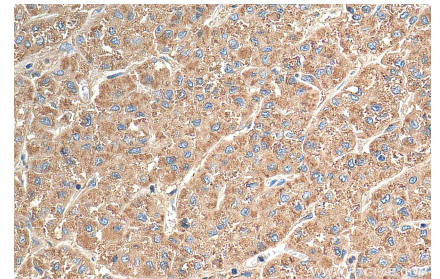
Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 81004-1-RR (LC3 antibody) at dilution of 1:500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human pancreas cancer tissue slide using 80294-1-RR (P62, SQSTM1 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human ovary tumor tissue slide using 81803-1-RR (ATG5 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 21997-1-AP (LAMP1 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

For technical support and original validation data for this product please contact

T: 1 (888) 4PTGLAB(1-888-478-4522)(toll free in USA), or 1(312) 455-8498(outside USA)

E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

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