

Product Information

The Autophagy Expanded 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 Expanded Antibody Kit contains antibodies against 10 key protein targets playing critical roles in the autophagy pathway.

Antigen	Catalog No.	Host, clonality	Tested Reactivity	Applications	Volume
ULK1	20986-1-AP	Rabbit polyclonal	H, M, R	WB, IHC, IF, ELISA	20 uL
Beclin 1	66665-1-Ig	Mouse monoclonal	H, M, R	WB, IHC, IF, ELISA	20 uL
ATG9A	26276-1-AP	Rabbit polyclonal	H, M, R	WB, IHC, IF, ELISA	20 uL
LC3	81004-1-RR	Rabbit monoclonal	H, M, R, Pg	WB, IHC, IF/ICC, ELISA	20 uL
p62	84826-1-RR	Rabbit monoclonal	H, M, R	WB, IHC, IF/ICC, IP, ELISA	20 uL
ATG5	81803-1-RR	Rabbit monoclonal	H, M, R	WB, IP, IHC, ELISA	20 uL
ATG16 L1	29445-1-AP	Rabbit polyclonal	H, M, R	WB, IHC, IF, ELISA	20 uL
ATG12	11264-1-AP	Rabbit polyclonal	H, M	WB, IHC, IF/ICC, ELISA	20 uL
Ubiquitin	80992-1-RR	Rabbit monoclonal	H, M, R	WB, IHC, IF, ELISA	20 uL
LAMP1	21997-1-AP	Rabbit polyclonal	H	WB, IHC, ELISA	20 uL

Also see our 'Autophagy Essentials Antibody Kit' on the following page

<https://www.ptglab.com/products/Autophagy-Essentials-Antibody-Kit-PK30004.htm>

Package

10× 20 uL

Storage

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

Background Information

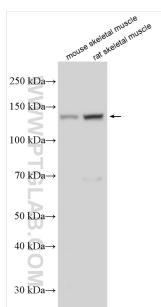
Autophagy is a highly dynamic process consisting of the following three steps: (1) autophagosome formation, (2) autophagosome-lysosome fusion, and (3) degradation. It can be induced by multiple signaling pathways related to various triggers including nutrient deprivation, growth factor signaling, and cellular stress. ULK1 and Beclin 1 are critical for the initiation of autophagy. 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. Ubiquitination of various autophagy-related proteins and regulatory proteins are critical for the precise regulation of the autophagy pathway.

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.

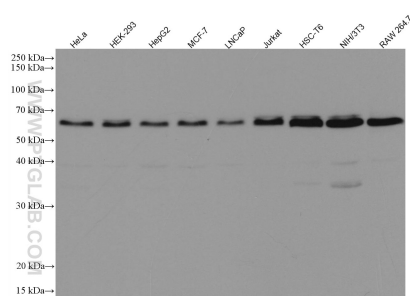
Standard Protocols

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

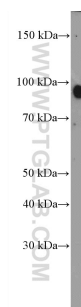
Validation Data



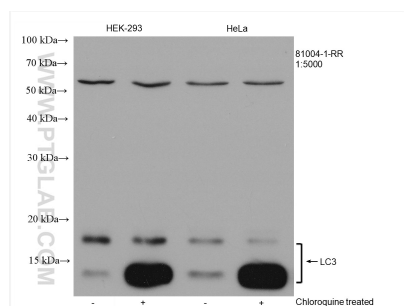
Various lysates were subjected to SDS PAGE followed by western blot with 20986-1-AP (ULK1 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



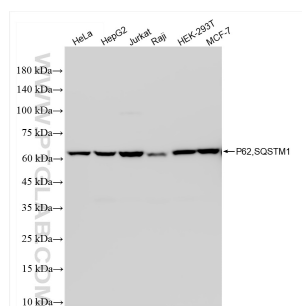
Various lysates were subjected to SDS PAGE followed by western blot with 66665-1-Ig (Beclin 1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



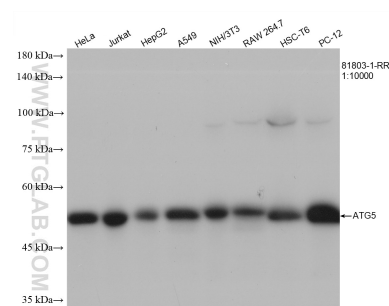
mouse brain tissue were subjected to SDS PAGE followed by western blot with 26276-1-AP (ATG9A Antibody) at dilution of 1:600 incubated at room temperature for 1.5 hours.



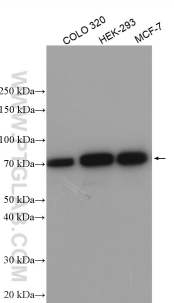
Untreated and chloroquine treated HEK-293 cells, untreated and chloroquine treated HeLa cells were subjected to SDS PAGE followed by western blot with 81004-1-RR (LC3 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



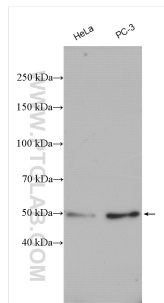
Various lysates were subjected to SDS PAGE followed by western blot with 84826-1-RR (P62, SQSTM1 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



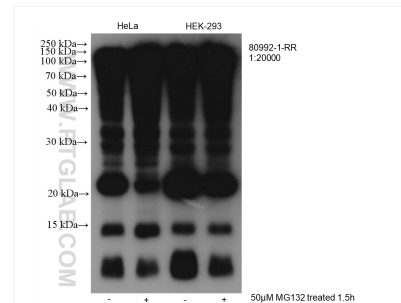
Various lysates were subjected to SDS PAGE followed by western blot with 81803-1-RR (ATG5 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



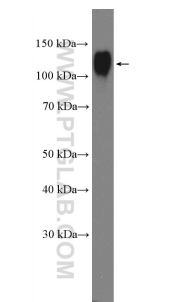
Various lysates were subjected to SDS PAGE followed by western blot with 29445-1-AP (ATG16L1 antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



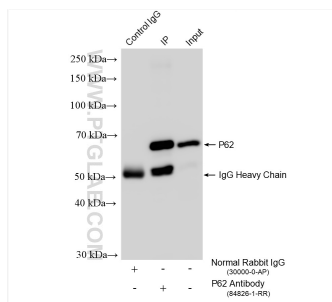
Various lysates were subjected to SDS PAGE followed by western blot with 11264-1-AP (ATG12 antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



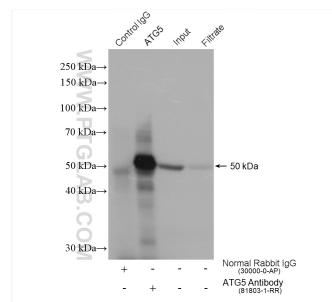
Various lysates were subjected to SDS PAGE followed by western blot with 80992-1-RR (ubiquitin antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



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: 84826-1-RR, 4 μg; Detection: 84826-1-RR 1:4000) with NIH/3T3 cells lysate 1920 μg.



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

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

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