abcam

ab155686

Anti-SQSTM1 / p62 antibody - Autophagosome Marker

Lab Essentials

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7 Preservative: 0.025% Proclin 300 Constituents: PBS, 20% Glycerol (glycerin, glycerine)
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human SQSTM1 aa 150-300. The exact immunogen used to generate this antibody is proprietary information. Database link Q13501
Purification technique	Affinity purification Immunogen
Concentration	0.39 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/50 - 1/200
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Rat
Dilution info	1/500 - 1/3000
Notes	-

Species	Human
Dilution info	1/500 - 1/3000
Notes	-

Species	Mouse
Dilution info	1/500 - 1/3000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/1000
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/1000
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information SQSTM1

Function

Molecular adapter required for selective macroautophagy (aggrephagy) by acting as a bridge between polyubiquitinated proteins and autophagosomes (PubMed:15340068, PubMed:15953362, PubMed:16286508, PubMed:17580304, PubMed:20168092, PubMed:22017874, PubMed:22622177, PubMed:24128730, PubMed:28404643, PubMed:29343546, PubMed:29507397, PubMed:31857589, PubMed:33509017, PubMed:34471133, PubMed:34893540, PubMed:35831301, PubMed:37306101, PubMed:37802024). Promotes the recruitment of ubiquitinated cargo proteins to autophagosomes via multiple domains that bridge proteins and organelles in different steps (PubMed:16286508, PubMed:20168092,

PubMed:22622177, PubMed:24128730, PubMed:28404643, PubMed:29343546, PubMed:29507397, PubMed:34893540, PubMed:37802024). SQSTM1 first mediates the assembly and removal of ubiquitinated proteins by undergoing liquid-liquid phase separation upon binding to ubiquitinated proteins via its UBA domain, leading to the formation of insoluble cytoplasmic inclusions, known as p62 bodies (PubMed:15911346, PubMed:20168092, PubMed:22017874, PubMed:24128730, PubMed:29343546, PubMed:29507397, PubMed:31857589, PubMed:37802024). SQSTM1 then interacts with ATG8 family proteins on autophagosomes via its LIR motif, leading to p62 body recruitment to autophagosomes, followed by autophagic clearance of ubiquitinated proteins (PubMed:16286508, PubMed:17580304, PubMed:20168092, PubMed:22622177, PubMed:24128730, PubMed:28404643, PubMed:37802024). SQSTM1 is itself degraded along with its ubiquitinated cargos (PubMed:16286508, PubMed:17580304, PubMed:37802024). Also required to recruit ubiquitinated proteins to PML bodies in the nucleus (PubMed:20168092). Also involved in autophagy of peroxisomes (pexophagy) in response to reactive oxygen species (ROS) by acting as a bridge between ubiquitinated PEX5 receptor and autophagosomes (PubMed:26344566). Acts as an activator of the NFE2L2/NRF2 pathway via interaction with KEAP1: interaction inactivates the BCR(KEAP1) complex by sequestering the complex in inclusion bodies, promoting nuclear accumulation of NFE2L2/NRF2 and subsequent expression of cytoprotective genes (PubMed:20452972, PubMed:28380357, PubMed:33393215, PubMed:37306101). Promotes relocalization of 'Lys-63'-linked ubiquitinated STING1 to autophagosomes (PubMed:29496741). Involved in endosome organization by retaining vesicles in the perinuclear cloud: following ubiquitination by RNF26, attracts specific vesicle-associated adapters, forming a molecular bridge that restrains cognate vesicles in the perinuclear region and organizes the endosomal pathway for efficient cargo transport (PubMed:27368102, PubMed:33472082). Sequesters tensin TNS2 into cytoplasmic puncta, promoting TNS2 ubiquitination and proteasomal degradation (PubMed:25101860). May regulate the activation of NFKB1 by TNF, nerve growth factor (NGF) and interleukin-1 (PubMed:10356400, PubMed:10747026, PubMed:11244088, PubMed:12471037, PubMed:16079148, PubMed:19931284). May play a role in titin/TTN downstream signaling in muscle cells (PubMed:15802564). Adapter that mediates the interaction between TRAF6 and CYLD (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

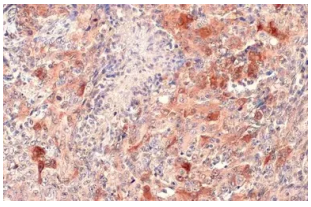
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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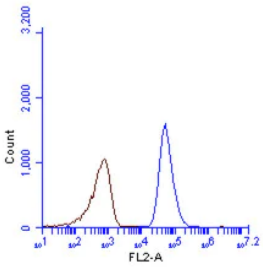
8 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686)

SQSTM1 / p62 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human Lung Cancer using rabbit Anti-SQSTM1 / p62 antibody

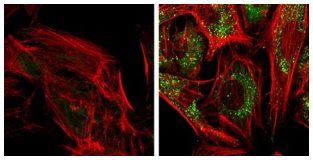
Paraffin-embedded human lung cancer tissue stained for SQSTM1 / P62 protein at cytoplasm with ab155686 at a 1/500 dilution in immunohistochemical analysis.
Antigen Retrieval: Citrate buffer, pH 6.0, 15 min



Flow Cytometry - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686)

SQSTM1 / p62 Flow Cytometry staining using rabbit Anti-SQSTM1 / p62 antibody

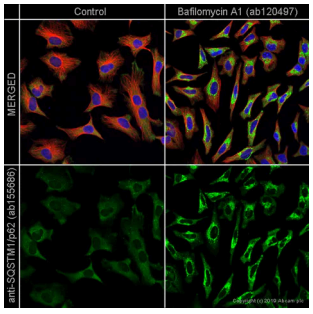
4% paraformaldehyde-fixed HeLa cells stained for SQSTM1/p62 (blue) using ab155686 (1/100) in Flow Cytometry. The cells were fixed at 4°C for 5 minutes. The brown line is unlabelled sample. Acquisition of >20,000 events were collected using Argon ion laser (488nm) and 525/30 bandpass filter.



Immunocytochemistry/ Immunofluorescence - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686)

SQSTM1 / p62 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SQSTM1 / p62 antibody

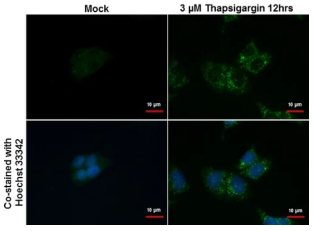
Immunocytochemistry/Immunofluorescent analysis of HeLa cells mock (left) and treated with 50µM Chloroquine for 24 hr (right) labeling SQSTM1/p62 (green) with ab155686 at 1/1000 dilution. Cells were fixed with 4% paraformaldehyde at RT for 15 min. Red: Phalloidin, a F-actin marker.



Immunocytochemistry/ Immunofluorescence - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686)

SQSTM1 / p62 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SQSTM1 / p62 antibody

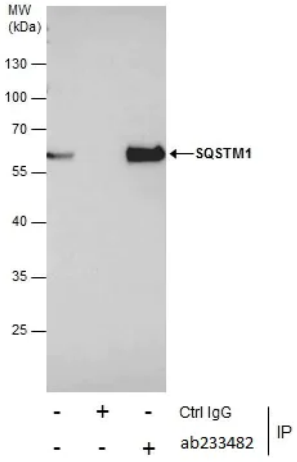
ab155686 staining SQSTM1/p62 (autophagosome) in control HeLa cells (left panel) and SQSTM1/p62 in HeLa cells treated with 1uM bafilomycin A1 (ab120497) for 18hrs (right panel). The cells were fixed with methanol (5min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab155686 at 1/500 dilution and ab7291 (Tubulin) at 1/1000 dilution overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) (ab150081) at 2 µg/ml (shown in green) and a goat secondary antibody to mouse IgG (Alexa Fluor® 594) (ab150120) at 2 µg/ml (shown in pseudo color red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunocytochemistry/ Immunofluorescence - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686)

SQSTM1 / p62 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SQSTM1 / p62 antibody

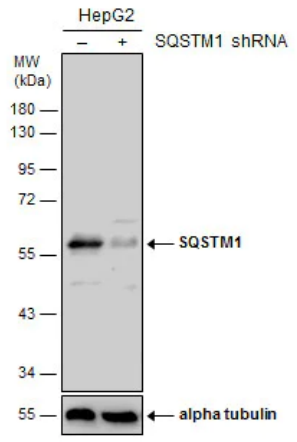
Immunocytochemistry/ Immunofluorescence analysis of HepG2 cells treated with 3µM thapsigargin for 12 hours (right) and mock (left) labeling SQSTM1/p62 with ab155686 at 1:500 (green). Cells were fixed in ice-cold MeOH for 10 minutes, permeabilized with cooled acetone for 1 minute. Cells were co-stained with Hoechst (blue).



Immunoprecipitation - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686)

Immunoprecipitation of SQSTM1/p62 protein from HeLa whole cell extracts using 5 µg of ab155686.
Western blot analysis was performed using ab155686.
Anti-Rabbit IgG was used as a secondary reagent.
All lanes:
Immunoprecipitation - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686)

Predicted band size: 47 kDa



Western blot - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686)

SQSTM1 / p62 Western blot staining using rabbit Anti-SQSTM1 / p62 antibody

10% SDS-PAGE
All lanes:
Western blot - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686) at 1/500 dilution

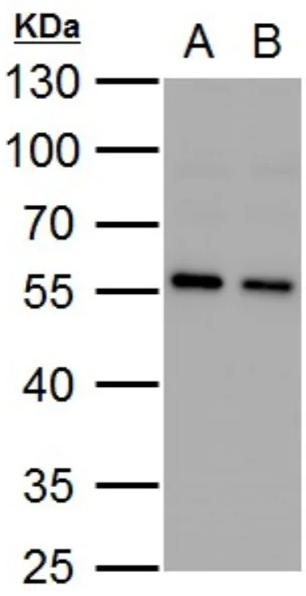
Lane 1:
HepG2 whole cell extracts at 30 µg

Lane 2:
SQSTM1/p62 shRNA transfected HepG2 whole cell extracts at 30 µg

Secondary

All lanes:
HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 47 kDa



Western blot - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686)

SQSTM1 / p62 Western blot staining using rabbit Anti-SQSTM1 / p62 antibody

10% SDS-PAGE
All lanes:
Western blot - Anti-SQSTM1 / p62 antibody - Autophagosome Marker (ab155686) at 1/1000 dilution

Lane 1:
PC-12 whole cell lysate/extract at 30 µg

Lane 2:
Rat2 whole cell lysate/extract at 30 µg

Secondary

All lanes:
HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 47 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.