

# SQSTM1 Antibody(C-term S403)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP19505b

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">Q13501</a>
<b>Other Accession</b>	<a href="#">O08623</a> , <a href="#">Q64337</a> , <a href="#">NP_001135770.1</a>
<b>Reactivity</b>	Human
<b>Predicted</b>	Mouse, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB41445
<b>Calculated MW</b>	47687
<b>Antigen Region</b>	383-409

## Additional Information

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<b>Gene ID</b>	8878
<b>Other Names</b>	Sequestosome-1, EBI3-associated protein of 60 kDa, EBIAP, p60, Phosphotyrosine-independent ligand for the Lck SH2 domain of 62 kDa, Ubiquitin-binding protein p62, SQSTM1, ORCA, OSIL
<b>Target/Specificity</b>	This SQSTM1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 383-409 amino acids from the C-terminal region of human SQSTM1.
<b>Dilution</b>	WB~~1:1000 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	SQSTM1 Antibody(C-term S403) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	SQSTM1 {ECO:0000303 PubMed:16286508, ECO:0000312 HGNC:HGNC:11280}
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## 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 relocation 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-alpha, 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).

## Cellular Location

Cytoplasmic vesicle, autophagosome. Preautophagosomal structure. Cytoplasm, cytosol. Nucleus, PML body. Late endosome. Lysosome. Nucleus Endoplasmic reticulum. Cytoplasm, myofibril, sarcomere {ECO:0000250|UniProtKB:O08623}. Note=In cardiac muscle, localizes to the sarcomeric band (By similarity). Localizes to cytoplasmic membraneless inclusion bodies, known as p62 bodies, containing polyubiquitinated protein aggregates (PubMed:[11786419](#), PubMed:[20357094](#), PubMed:[22017874](#), PubMed:[29343546](#), PubMed:[29507397](#), PubMed:[31857589](#), PubMed:[37306101](#), PubMed:[37802024](#)). In neurodegenerative diseases, detected in Lewy bodies in Parkinson disease, neurofibrillary tangles in Alzheimer disease, and HTT aggregates in Huntington disease

(PubMed:15158159). In protein aggregate diseases of the liver, found in large amounts in Mallory bodies of alcoholic and nonalcoholic steatohepatitis, hyaline bodies in hepatocellular carcinoma, and in SERPINA1 aggregates (PubMed:11981755) Enriched in Rosenthal fibers of pilocytic astrocytoma (PubMed:11786419). In the cytoplasm, observed in both membrane-free ubiquitin-containing protein aggregates (sequestosomes) and membrane-surrounded autophagosomes (PubMed:15953362, PubMed:17580304) Colocalizes with TRIM13 in the perinuclear endoplasmic reticulum (PubMed:22178386). Co-localizes with TRIM5 in cytoplasmic bodies (PubMed:20357094). When nuclear export is blocked by treatment with leptomycin B, accumulates in PML bodies (PubMed:20168092) {ECO:0000250|UniProtKB:O08623, ECO:0000269|PubMed:11786419, ECO:0000269|PubMed:11981755, ECO:0000269|PubMed:15158159, ECO:0000269|PubMed:15953362, ECO:0000269|PubMed:17580304, ECO:0000269|PubMed:20168092, ECO:0000269|PubMed:20357094, ECO:0000269|PubMed:22017874, ECO:0000269|PubMed:22178386, ECO:0000269|PubMed:29343546, ECO:0000269|PubMed:29507397, ECO:0000269|PubMed:31857589, ECO:0000269|PubMed:37306101, ECO:0000269|PubMed:37802024}

**Tissue Location** Ubiquitously expressed.

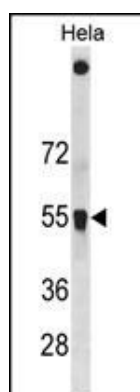
## Background

This gene encodes a multifunctional protein that binds ubiquitin and regulates activation of the nuclear factor kappa-B (NF- $\kappa$ B) signaling pathway. The protein functions as a scaffolding/adaptor protein in concert with TNF receptor-associated factor 6 to mediate activation of NF- $\kappa$ B in response to upstream signals. Alternatively spliced transcript variants encoding either the same or different isoforms have been identified for this gene. Mutations in this gene result in sporadic and familial Paget disease of bone.

## References

Visconti, M.R., et al. J. Bone Miner. Res. 25(11):2368-2373(2010)  
Ding, W.X., et al. J. Biol. Chem. 285(36):27879-27890(2010)  
Gao, C., et al. Nat. Cell Biol. 12(8):781-790(2010)  
Jain, A., et al. J. Biol. Chem. 285(29):22576-22591(2010)  
Lau, A., et al. Mol. Cell. Biol. 30(13):3275-3285(2010)

## Images



SQSTM1 Antibody (C-term S403) (Cat. #AP19505b)  
western blot analysis in HeLa cell line lysates  
(35ug/lane). This demonstrates the SQSTM1 antibody  
detected the SQSTM1 protein (arrow).

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