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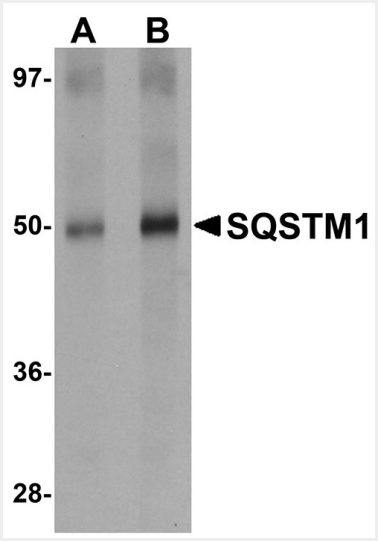
SQSTM1 Antibody
Catalog # ASC11000

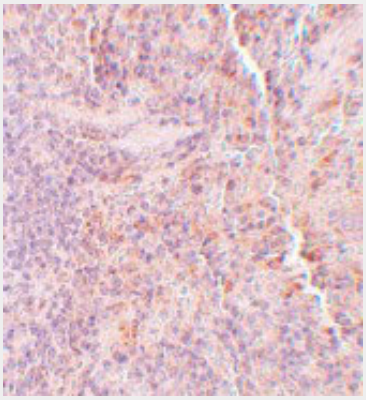
Specification

SQSTM1 Antibody - Product Information

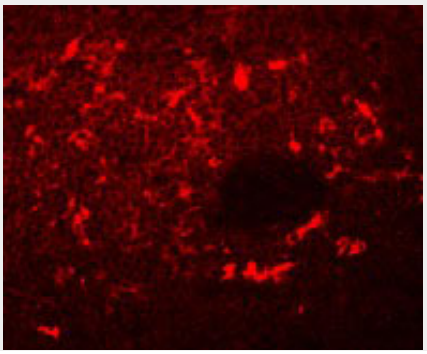
Application	**WB, IHC, IF**
Primary Accession	Q13501
Other Accession	Q13501, 74735628
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**SQSTM1 antibody can be used for detection of SQSTM1 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**



Western blot analysis of SQSTM1 in Human spleen tissue lysate with SQSTM1 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of SQSTM1 in rat spleen tissue with SQSTM1 antibody at 5 µg/mL.



SQSTM1 Antibody - Additional Information

Gene ID **8878**

Target/Specificity
SQSTM1;

Reconstitution & Storage
SQSTM1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
SQSTM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SQSTM1 Antibody - Protein Information

Name SQSTM1

Synonyms ORCA, OSIL

Function
Autophagy receptor required for selective macroautophagy (aggrephagy). Functions as a bridge between polyubiquitinated cargo and autophagosomes. Interacts directly with both the cargo to become degraded and an autophagy modifier of the MAP1 LC3 family (PubMed:16286508, PubMed:20168092, PubMed:24128730, PubMed:28404643, PubMed:22622177). Along with WDFY3, involved in the formation and autophagic degradation of cytoplasmic ubiquitin-containing inclusions (p62 bodies, ALIS/aggresome-like induced structures). Along with WDFY3, required to recruit ubiquitinated proteins to PML bodies in the nucleus (PubMed:24128730, PubMed:20168092). May regulate the activation of NFKB1 by TNF-alpha, nerve growth factor (NGF) and interleukin-1. May play a role in titin/TTN downstream signaling in muscle cells. May regulate signaling cascades through ubiquitination. Adapter that mediates the interaction between TRAF6 and CYLD (By similarity). May be involved in cell differentiation, apoptosis, immune response and regulation of K(+) channels. 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). Promotes relocalization of 'Lys-63'-linked

Immunofluorescence of SQSTM1 in Rat Spleen cells with SQSTM1 antibody at 20 µg/mL.

SQSTM1 Antibody - Background

SQSTM1 Antibody: SQSTM1/p62 is an adapter protein which binds ubiquitin and regulates signaling cascades through ubiquitination. It may regulate the activation of NF-κB by TNF-α, nerve growth factor (NGF) and interleukin-1. SQSTM1/p62, a co-interacting protein of the atypical PKC isoforms, has a UBA domain at its C-terminal end, which binds non-covalently to polyubiquitin chain. SQSTM1's UBA domain is necessary for recruitment of polyubiquitin and aggresome formation. SQSTM1 may play a role in titin/TTN downstream signaling in muscle cells and may be involved in cell differentiation, apoptosis, immune response and regulation of K+ channels. Mutations in the ubiquitin-associated (UBA) domain of SQSTM1 commonly cause Paget's disease of bone since the UBA is necessary for aggregate sequestration and cell survival.

SQSTM1 Antibody - References

Seibenhener ML, Babu JR, Geeth T, et al. Sequestosome 1/p62 is a polyubiquitin chain binding protein involved in ubiquitin proteasome degradation. Mol. Cell. Biol.2004; 24:8055-68.
Hocking LJ, Lucas GJ, Daroszewska A, et al. Domain-specific mutations in sequestosome 1 (SQSTM1) cause familial and sporadic Paget’s disease. Hum. Mol. Genet.2002; 11:2735-9.
Rousiere M, Michou L, Cornelis F, et al. Paget’s disease of bone. Best Pract. Res. Clin. Rheumatol.2003; 17:1019-41.
Layfield R, Ciani B, Ralston SH, et al. Structural and functional studies of mutations affecting the UBA domain of SQSTM1 (p62) which cause Paget’s disease of bone. Biochem. Soc. Trans.2004; 32:728-30.

ubiquitinated STING1 to autophagosomes (PubMed:29496741). Acts as an activator of the NFE2L2/NRF2 pathway via interaction with KEAP1: interaction inactivates the BCR(KEAP1) complex, promoting nuclear accumulation of NFE2L2/NRF2 and subsequent expression of cytoprotective genes (PubMed:20452972, PubMed:28380357).

Cellular Location
Cytoplasm, cytosol. Late endosome. Lysosome. Cytoplasmic vesicle, autophagosome. Nucleus. Endoplasmic reticulum. Nucleus, PML body. Cytoplasm, myofibril, sarcomere. Note=In cardiac muscle, localizes to the sarcomeric band (By similarity). Commonly found in inclusion bodies containing polyubiquitinated protein aggregates. In neurodegenerative diseases, detected in Lewy bodies in Parkinson disease, neurofibrillary tangles in Alzheimer disease, and HTT aggregates in Huntington disease. 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 Enriched in Rosenthal fibers of pilocytic astrocytoma. In the cytoplasm, observed in both membrane-free ubiquitin-containing protein aggregates (sequestosomes) and membrane-surrounded autophagosomes Colocalizes with TRIM13 in the perinuclear endoplasmic reticulum. Co- localizes with TRIM5 in cytoplasmic bodies. When nuclear export is blocked by treatment with leptomycin B, accumulates in PML bodies

Tissue Location
Ubiquitously expressed.

SQSTM1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot

- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture