

[20168092](http://www.uniprot.org/citations/20168092) PubMed: [22017874](http://www.uniprot.org/citations/22017874) PubMed: [22622177](http://www.uniprot.org/citations/22622177) PubMed: [24128730](http://www.uniprot.org/citations/24128730) PubMed: [28404643](http://www.uniprot.org/citations/28404643) PubMed: [29343546](http://www.uniprot.org/citations/29343546) PubMed: [29507397](http://www.uniprot.org/citations/29507397) PubMed: [31857589](http://www.uniprot.org/citations/31857589) PubMed: [33509017](http://www.uniprot.org/citations/33509017) PubMed: [34471133](http://www.uniprot.org/citations/34471133) PubMed: [34893540](http://www.uniprot.org/citations/34893540) PubMed: [35831301](http://www.uniprot.org/citations/35831301) PubMed: [37306101](http://www.uniprot.org/citations/37306101) PubMed: [37802024](http://www.uniprot.org/citations/37802024)). Promotes the recruitment of ubiquitinated cargo proteins to autophagosomes via multiple domains that bridge proteins and organelles in different steps (PubMed: [16286508](http://www.uniprot.org/citations/16286508) PubMed: [20168092](http://www.uniprot.org/citations/20168092) PubMed: [22622177](http://www.uniprot.org/citations/22622177) PubMed: [24128730](http://www.uniprot.org/citations/24128730) PubMed: [28404643](http://www.uniprot.org/citations/28404643) PubMed: [29343546](http://www.uniprot.org/citations/29343546) PubMed: [29507397](http://www.uniprot.org/citations/29507397) PubMed: [34893540](http://www.uniprot.org/citations/34893540) PubMed: [37802024](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/15911346) PubMed: [20168092](http://www.uniprot.org/citations/20168092) PubMed: [22017874](http://www.uniprot.org/citations/22017874) PubMed: [24128730](http://www.uniprot.org/citations/24128730) PubMed: [29343546](http://www.uniprot.org/citations/29343546) PubMed: [29507397](http://www.uniprot.org/citations/29507397) PubMed: [31857589](http://www.uniprot.org/citations/31857589) PubMed: [37802024](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/16286508) PubMed: [17580304](http://www.uniprot.org/citations/17580304) PubMed: [20168092](http://www.uniprot.org/citations/20168092) PubMed: [22622177](http://www.uniprot.org/citations/22622177) PubMed: [24128730](http://www.uniprot.org/citations/24128730) PubMed: [28404643](http://www.uniprot.org/citations/28404643) PubMed: [37802024](http://www.uniprot.org/citations/37802024)). SQSTM1 is itself degraded along with its ubiquitinated cargos (PubMed: [16286508](http://www.uniprot.org/citations/16286508) PubMed: [17580304](http://www.uniprot.org/citations/17580304) PubMed: [37802024](http://www.uniprot.org/citations/37802024)). Also required to recruit ubiquitinated proteins to PML bodies in the nucleus (PubMed: [20168092](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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: [20168092](http://www.uniprot.org/citations/20168092) PubMed: [22017874](http://www.uniprot.org/citations/22017874) PubMed: [22622177](http://www.uniprot.org/citations/22622177) PubMed: [24128730](http://www.uniprot.org/citations/24128730) PubMed: [28404643](http://www.uniprot.org/citations/28404643) PubMed: [29343546](http://www.uniprot.org/citations/29343546) PubMed: [29507397](http://www.uniprot.org/citations/29507397) PubMed: [31857589](http://www.uniprot.org/citations/31857589) PubMed: [33509017](http://www.uniprot.org/citations/33509017) PubMed: [34471133](http://www.uniprot.org/citations/34471133) PubMed: [34893540](http://www.uniprot.org/citations/34893540) PubMed: [35831301](http://www.uniprot.org/citations/35831301) PubMed: [37306101](http://www.uniprot.org/citations/37306101) PubMed: [37802024](http://www.uniprot.org/citations/37802024)).

[20452972](http://www.uniprot.org/citations/20452972), PubMed:<[28380357](http://www.uniprot.org/citations/28380357)>, PubMed:<[33393215](http://www.uniprot.org/citations/33393215)>, PubMed:<[37306101](http://www.uniprot.org/citations/37306101)>). Promotes relocalization of 'Lys-63'-linked ubiquitinated STING1 to autophagosomes (PubMed:<[29496741](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/27368102)>, PubMed:<[33472082](http://www.uniprot.org/citations/33472082)>). Sequesters tensin TNS2 into cytoplasmic puncta, promoting TNS2 ubiquitination and proteasomal degradation (PubMed:<[25101860](http://www.uniprot.org/citations/25101860)>). May regulate the activation of NFKB1 by TNF-alpha, nerve growth factor (NGF) and interleukin-1 (PubMed:<[10356400](http://www.uniprot.org/citations/10356400)>, PubMed:<[10747026](http://www.uniprot.org/citations/10747026)>, PubMed:<[11244088](http://www.uniprot.org/citations/11244088)>, PubMed:<[12471037](http://www.uniprot.org/citations/12471037)>, PubMed:<[16079148](http://www.uniprot.org/citations/16079148)>, PubMed:<[19931284](http://www.uniprot.org/citations/19931284)>). May play a role in titin/TTN downstream signaling in muscle cells (PubMed:<[15802564](http://www.uniprot.org/citations/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

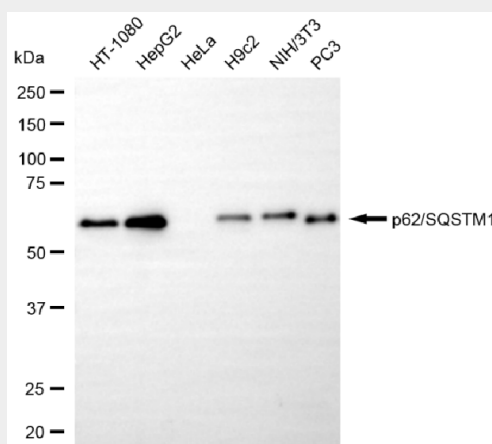
Ubiquitously expressed.

KD-Validated Anti-Sequestosome 1 Rabbit Monoclonal Antibody - Protocols

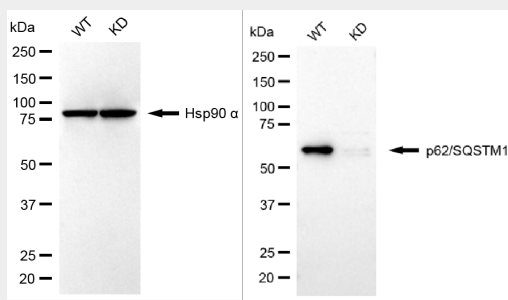
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

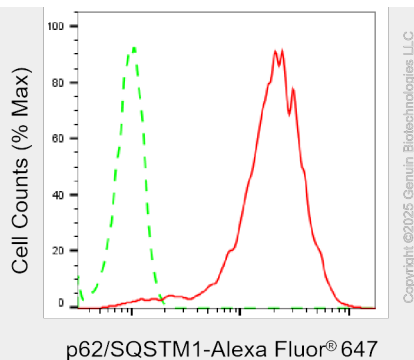
KD-Validated Anti-Sequestosome 1 Rabbit Monoclonal Antibody - Images



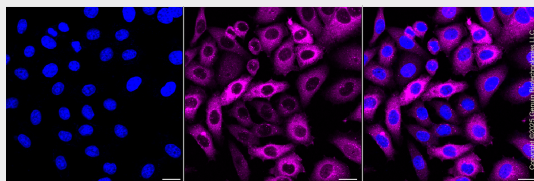
Western blotting analysis using anti-p62/SQSTM1 antibody (Cat#AGI1378). Total cell lysates (30 μ g) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-p62/SQSTM1 antibody (Cat#AGI1378, 1:10,000) and HRP-conjugated goat anti rabbit secondary antibody respectively.



Western blotting analysis using anti-p62/SQSTM1 antibody (Cat#AGI1378). p62/SQSTM1 expression in wild type (WT) and SQSTM1 knockdown (KD) HSHC cells with 20 μ g of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-p62/SQSTM1 antibody (Cat#AGI1378, 1:10,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of p62/SQSTM1 expression in HepG2 cells using anti-p62/SQSTM1 antibody (Cat#AGI1378, 1:2,000). Green, isotype control; red, p62/SQSTM1.



Immunocytochemical staining of HepG2 cells with anti-p62/SQSTM1 antibody (Cat#AGI1378, 1:1,000). Nuclei were stained blue with DAPI; p62/SQSTM1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 μ m.