

Product datasheet for **TA336780**

SQSTM1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, ICC/IF, IHC, Simple Western, WB
Recommended Dilution:	Immunohistochemistry-Frozen, Simple Western: 1:25, Immunocytochemistry/Immunofluorescence: 1:25-1:200, Western Blot: 1:4000, Immunohistochemistry-Paraffin, Immunohistochemistry, Immunohistochemistry Free-Floating, Flow Cytometry
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A genomic peptide made to an internal region of the human p62/SQSTM1 protein (within residues 300-450). [Swiss-Prot Q13501]
Formulation:	PBS, 30% glycerol, 0.1% Sodium Azide. Store at -20C. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Immunogen affinity purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	47 kDa
Gene Name:	sequestosome 1
Database Link:	NP_003891 Entrez Gene 18412 Mouse Entrez Gene 113894 Rat Entrez Gene 8878 Human Q13501



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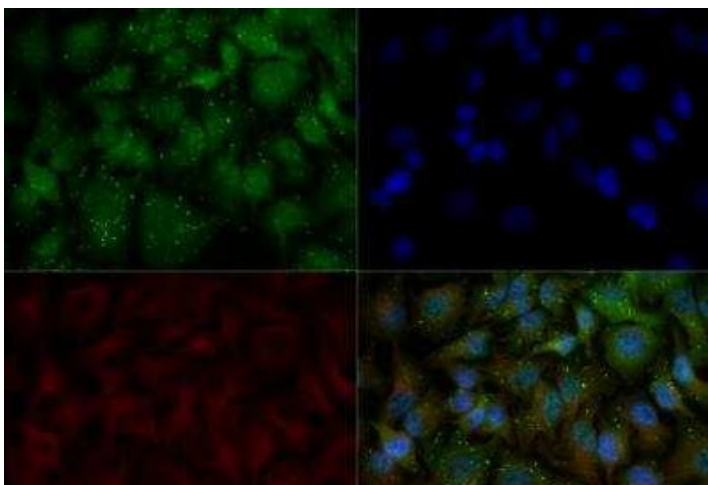
Background: p62/SQSTM1 (sequestosome 1) is ubiquitously-expressed cytoplasmic/adaptor protein conserved in vertebrates and it can be induced by proteasomal inhibitor PSI, PGJ2/prostaglandin J2 as well as phorbol 12-myristate 13-acetate (PMA). SQSTM1 has the ability of ubiquitin binding as well as regulating NFkB1 activation by TNF-alpha, NGF (nerve growth factor) and interleukin-1. SQSTM1 acts as an adapter that mediates the interaction between TRAF6 and CYLD, and SQSTM1-TRAF6 interaction leads to K63-linked polyubiquitination of TRAF6 followed by subsequent activation of NFkB pathway. SQSTM1 plays a role in TITIN/TTN downstream signaling in muscle cells and regulate signaling cascades through ubiquitination. SQSTM1 is essential both for formation and autophagic degradation of polyubiquitin-containing bodies which are known as aggresome-like induced structures (ALIS) and SQSTM1 connects ALIS to the autophagic machinery via direct interaction with MAP1 LC3 family members. Moreover, while autophagy modulates SQSTM1 protein levels, SQSTM1 suppresses autophagy via activation of mTORC1. SQSTM1 interacts with KEAP1, which is a cytoplasmic inhibitor of NRF2, a key transcription factor involved in cellular responses to oxidative stress. SQSTM1 functions as a signaling hub for various signal transduction pathways, apoptosis, cell differentiation, apoptosis, immune response, regulation of K⁺ channels and Nrf2 activation, and its dysregulation is associated with Paget disease of bone and tumorigenesis.

Synonyms: A170; OSIL; p60; p62; p62B; PDB3; ZIP3

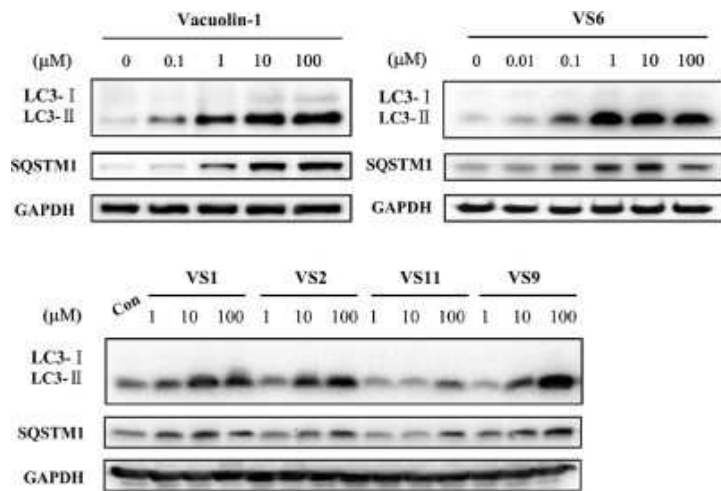
Note: This p62/SQSTM1 antibody is useful for Immunocytochemistry/Immunofluorescence and Western blot, where a band is seen at ~47 kDa. Use in Immunohistochemistry-Frozen reported in scientific literature (PMID 25014022)

Protein Families: Druggable Genome, Transcription Factors

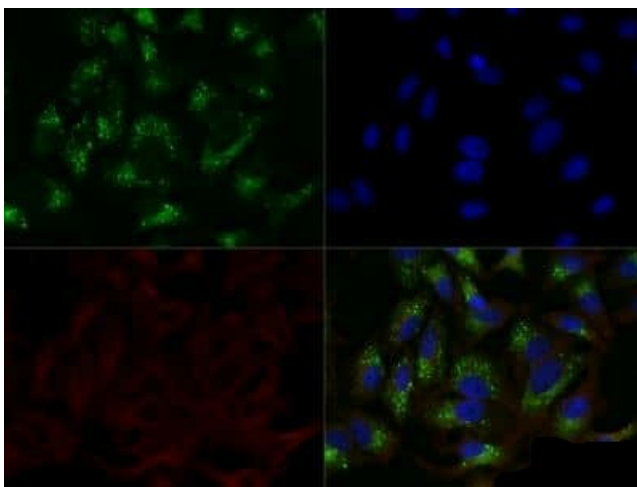
Product images:



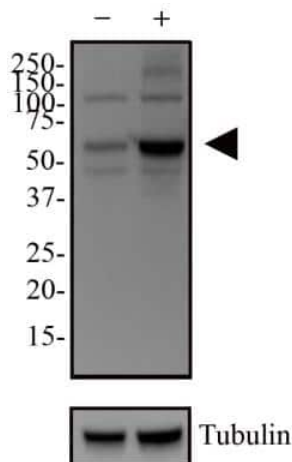
Immunocytochemistry/Immunofluorescence: p62/SQSTM1 Antibody - BSA Free TA336780 - p62/SQSTM1 Antibody TA336780 - Untreated HeLa cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton X-100. The cells were incubated with anti-p62/SQSTM1 at a 1:200 dilution overnight at 4C and detected with an anti-rabbit DyLight 488 (Green) at a 1:500 dilution. Alpha tubulin (DM1A) NB100-690 was used as a co-stain at a 1:1000 dilution and detected with an anti-mouse DyLight 550 (Red) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



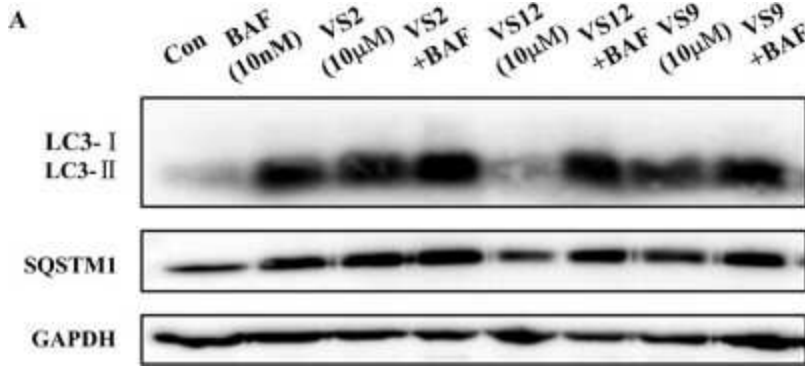
Western Blot: p62/SQSTM1 Antibody - BSA Free TA336780 - p62/SQSTM1 Antibody TA336780 - Vacuolin-1 analogues identified via virtual screening induced the accumulation of both LC3B-II and SQSTM1 in HeLa cells in a dose dependent manner after a 6 h treatment. Identification of Novel Vacuolin-1 Analogues as Autophagy Inhibitors by Virtual Drug Screening and Chemical Synthesis. *Molecules* (2017)



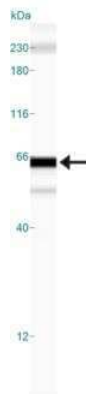
Immunocytochemistry/Immunofluorescence: p62/SQSTM1 Antibody - BSA Free TA336780 - p62/SQSTM1 Antibody TA336780 - HeLa cells were treated overnight with 50uM CQ, then fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton X-100. The cells were incubated with anti-p62/SQSTM1 at a 1:200 dilution overnight at 4C and detected with an anti-rabbit DyLight 488 (Green) at a 1:500 dilution. Alpha tubulin (DM1A) NB100-690 was used as a co-stain at a 1:1000 dilution and detected with an anti-mouse DyLight 550 (Red) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



Western Blot: p62/SQSTM1 Antibody - BSA Free TA336780 - p62/SQSTM1 Antibody TA336780 - Cultured HeLa cells were treated with or without 50 uM chloroquine for 24 hours as indicated. Cell lysates were prepared and separated on a 12% gel by SDS-PAGE. Protein was transferred to PVDF membrane and blocked in 5% non-fat milk. The membrane was then probed with 1 ug/ml anti-p62/SQSM1 in 1% milk and detected with an anti-rabbit HRP secondary antibody using chemiluminescence. Note the upregulation of p62 (arrowhead) in response to chloroquine treatment and the blockage of autophagy.



Western Blot: p62/SQSTM1 Antibody - BSA Free TA336780 - p62/SQSTM1 Antibody TA336780 - Vacuolin-1 analogues identified via virtual screening inhibited autophagic flux in HeLa cells. (A) Treatment of HeLa cells with vacuolin-1 analogues (10 M) and BAF (100 nM) failed to further increase the accumulation of both LC3B-II and SQSTM1 as compared to either drug alone. (B) Vacuolin-1 (10 M) or VS6 (10 M) induced the accumulation of yellow LC3B-II puncta in RFP-GFP-LC3B expressing HeLa cells. Scale bar = 10 m. Identification of Novel Vacuolin-1 Analogues as Autophagy Inhibitors by Virtual Drug Screening and Chemical Synthesis. *Molecules* (2017)



Simple Western: p62/SQSTM1 Antibody - BSA Free TA336780 - p62/SQSTM1 Antibody TA336780 - Lane view shows a specific band for p62/SQSTM1 in 1.0 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.