

Product datasheet for **TA336760**

SQSTM1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, ICC/IF, Simple Western, WB
Recommended Dilution:	Simple Western: 1:25, Immunocytochemistry/ Immunofluorescence: 1:50, Western Blot: 1:2000, Knockout Validated, Flow Cytometry
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A synthetic peptide made to an internal region of the human p62/SQSTM1 protein (within residues 400-450). [Swiss-Prot Q13501]
Formulation:	PBS, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. 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 NF κ B1 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 NF κ B 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:

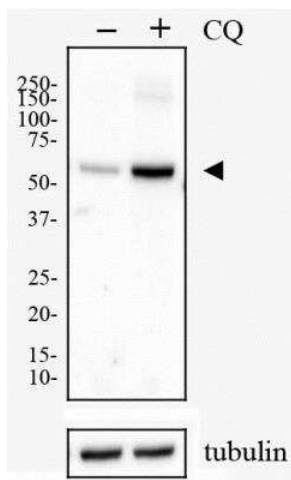
A170; OSIL; p60; p62; p62B; PDB3; ZIP3

Note:

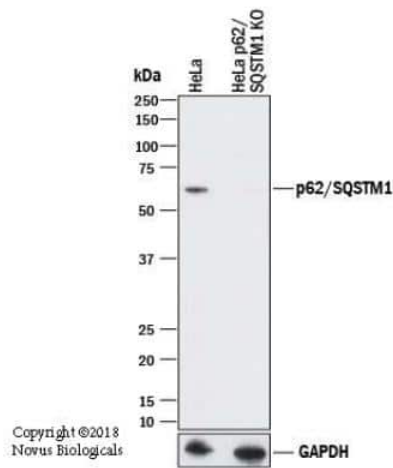
This p62/SQSTM1 antibody is useful for Immunocytochemistry/Immunofluorescence and Western blot, where a band is seen at ~47 kDa.

Protein Families:

Druggable Genome, Transcription Factors

Product images:

Western Blot: p62/SQSTM1 Antibody TA336760 - HeLa cells were treated with (+) or without 50 μ M (-) of Chloroquine (CQ) for 24 hours. Total 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 2 μ g/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.



Knockout Validated: p62/SQSTM1 Antibody TA336760 - Western blot shows lysates of HeLa human cervical epithelial carcinoma parental cell line and p62/SQSTM1 knockout (KO) HeLa cell line. PVDF membrane was probed with Rabbit Anti-Human p62/SQSTM1 polyclonal Antibody (Catalog # TA336760) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog #HAF008). Specific band was detected for p62/SQSTM1 at approximately 60 kDa (as indicated) in the parental HeLa cell line, but is not detectable in the knockout HeLa cell line. This experiment was conducted under reducing conditions.



Simple Western: p62/SQSTM1 Antibody TA336760 - Simple Western lane view shows a specific band for p62/SQSTM1 in 0.5 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.