

SQSTM1/p62 (D10E10) Rabbit mAb (IF Preferred)



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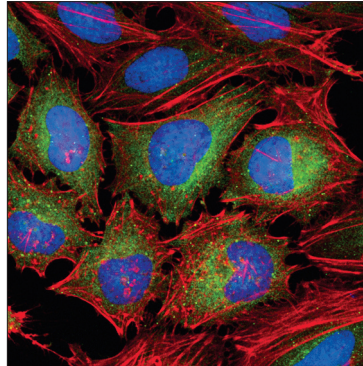
Applications IP, IF-IC Endogenous	Species Cross-Reactivity* H	Molecular Wt. 62 kDa	Isotype Rabbit IgG**
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Background: Sequestosome 1 (SQSTM1, p62) is a ubiquitin binding protein involved in cell signaling, oxidative stress, and autophagy (1-4). It was first identified as a protein that binds to the SH2 domain of p56Lck (5), and independently found to interact with PKC ζ (6,7). It was subsequently found to interact with ubiquitin, providing a scaffold for several signaling proteins and triggering degradation of proteins through the proteasome or lysosome (8). Interaction between SQSTM1 and TRAF6 leads to the K63-linked polyubiquitination of TRAF6 and subsequent activation of the NF- κ B pathway (9). Protein aggregates formed by SQSTM1 can be degraded by the autophagosome (4,10,11). SQSTM1 binds autophagosomal membrane protein LC3/Atg8, bringing SQSTM1-containing protein aggregates to the autophagosome (12). Lysosomal degradation of autophagosomes leads to a decrease in SQSTM1 levels during autophagy; conversely, autophagy inhibitors stabilize SQSTM1 levels. Studies have demonstrated a link between SQSTM1 and oxidative stress. SQSTM1 interacts with KEAP1, which is a cytoplasmic inhibitor of NRF2, a key transcription factor involved in cellular responses to oxidative stress (3). Thus, accumulation of SQSTM1 can lead to an increase in NRF2 activity.

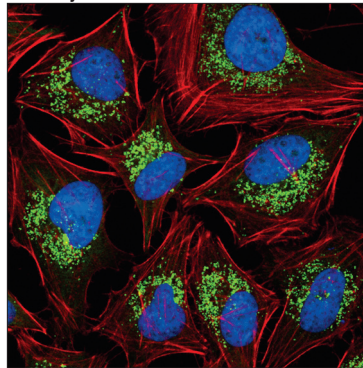
Specificity/Sensitivity: SQSTM1/p62 (D10E10) Rabbit mAb (IF Preferred) is recommended to detect endogenous levels of total SQSTM1/p62 protein by immunofluorescence. Products SQSTM1/p62 (D5E2) Rabbit mAb #8025 and SQSTM1/p62 Antibody #5114 are preferred for western blot.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human SQSTM1/p62 protein.

Untreated



Bafilomycin A-treated



Confocal immunofluorescent analysis of HeLa cells, untreated (upper) or treated with bafilomycin A (100 nM, 18 hr; lower), using SQSTM1/p62 (D10E10) Rabbit mAb (IF Preferred) (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Entrez-Gene ID #8878
UniProt ID #Q13501

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Immunoprecipitation	1:50
Immunofluorescence (IF-IC)	1:100

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) Kirkin, V. et al. (2009) *Mol Cell* 34, 259-69.
- (2) Seibenhener, M.L. et al. (2007) *FEBS Lett* 581, 175-9.
- (3) Komatsu, M. et al. (2010) *Nat Cell Biol* 12, 213-23.
- (4) Bjørkøy, G. et al. (2006) *Autophagy* 2, 138-9.
- (5) Jung, I. et al. (1996) *Proc Natl Acad Sci USA* 93, 5991-5.
- (6) Sanchez, P. et al. (1998) *Mol Cell Biol* 18, 3069-80.
- (7) Puls, A. et al. (1997) *Proc Natl Acad Sci USA* 94, 6191-6.
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- (11) Komatsu, M. et al. (2007) *Cell* 131, 1149-63.
- (12) Pankiv, S. et al. (2007) *J Biol Chem* 282, 24131-45.

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