Revision 5

Store at -20C

#23214

SQSTM1/p62 (D6M5X) Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P, IF-IC	M R	Endogenous	62	Rabbit IgG	#Q64337	18412

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
Immunohistochemistry (Paraffin)	1:125 - 1:500
Immunofluorescence (Immunocytochemistry)	1:400 - 1:1600

Storage

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

Specificity/Sensitivity

SQSTM1/p62 (D6M5X) Rabbit mAb recognizes endogenous levels of total rodent SQSTM1/p62 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly300 of mouse SQSTM1/p62 protein.

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 PKCζ (6,7). SQSTM1 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-κB 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.

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. Joung, 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.
8. Vadlamudi, R.K. et al. (1996) *J Biol Chem* 271, 20235-7.
9. Wooten, M.W. et al. (2005) *J Biol Chem* 280, 35625-9.
10. Bjørkøy, G. et al. (2005) *J Cell Biol* 171, 603-14.
11. Komatsu, M. et al. (2007) *Cell* 131, 1149-63.
12. Pankiv, S. et al. (2007) *J Biol Chem* 282, 24131-45.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

M: Mouse **R:** Rat

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