

**PathScan® RP Total SQSTM1/p62 Sandwich ELISA Kit**

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1 Kit (96 assays)

**Species Cross Reactivity:** H Mk  
**UniProt ID:** #Q13501  
**Entrez-Gene Id:** #8878

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

Product Includes	Product #	Quantity	Color	Storage Temp
SQSTM1/p62 Mouse mAb Coated Microwells	15806	96 tests		+4C
SQSTM1/p62 Rabbit Detection mAb	30367	1 ea	Red (Lyophilized)	+4C
HRP Diluent	13515	5.5 ml	Red	+4C
TMB Substrate	7004	11 ml		+4C
STOP Solution	7002	11 ml		+4C
Sealing Tape	54503	2 ea		+4C
ELISA Wash Buffer (20X)	9801	25 ml		+4C
Cell Lysis Buffer (10X)	9803	15 ml		-20C

Kit contents scale proportionally with size, except sealing tape.

Example: The V1 kit contains 5X the listed quantities above, but will exclude the sealing tape.

For the "C" and "V" kits, the supplied 96-well strip plate consists of twelve 8-well strips in a support frame. This enables custom plate configurations.

## Description

The rapid protocol (RP) PathScan® RP Total SQSTM1/p62 Sandwich ELISA Kit is a solid phase sandwich enzyme-linked immunosorbent assay (ELISA) that detects endogenous levels of SQSTM1/p62 protein in a reduced assay time of 1.5 hours. Incubation of cell lysates and detection antibody on the coated microwell plate forms a sandwich with SQSTM1/p62 in a single step. The plate is then extensively washed and TMB reagent is added for signal development. The magnitude of absorbance for the developed color is proportional to the quantity of SQSTM1/p62. Learn more about all of your ELISA kit options here.

\*Antibodies in this kit are custom formulations specific to kit.

## Specificity/Sensitivity

The PathScan® RP Total SQSTM1/p62 Sandwich ELISA Kit detects endogenous levels of SQSTM1/p62 protein. This kit sensitivity is shown in Figure 1. This kit detects proteins from the indicated species, as determined through in-house testing, but may also detect homologous proteins from other species.

## 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

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