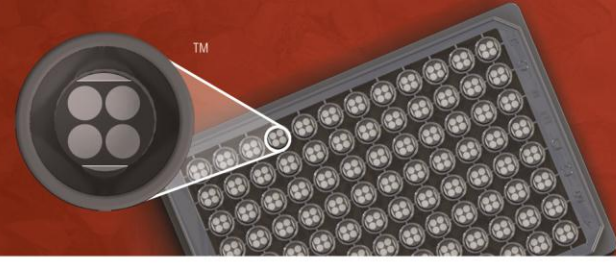


MSD[®] Total p62 (SQSTM1) Kit

For quantitative determination in human, mouse, and rat whole cell lysate samples



Alzheimer's Disease
BioProcess
Cardiac
Cell Signaling
Clinical Immunology
Cytokines
Growth Factors
Hypoxia
Immunogenicity
Inflammation
Metabolic
Oncology
Toxicology
Vascular

Catalog Numbers

Total p62 (SQSTM1) Kit	
Kit size	
1 plate	K151MJJD-1
5 plates	K151MJJD-2
25 plates	K151MJJD-4

Ordering information

MSD Customer Service
Phone: 1-301-947-2085
Fax: 1-301-990-2776
Email: CustomerService@mesoscale.com

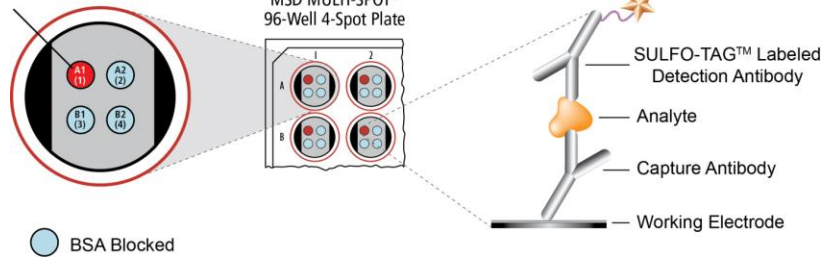
Company Address

MESO SCALE DISCOVERY[®]
division of
Meso Scale Diagnostics, LLC.
9238 Gaither Road
Gaithersburg, MD 20877 USA

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p62 (SQSTM1)



The **p62/Sequestosome 1 (p62, SQSTM1)** protein is a scaffold protein that binds polyubiquitin chains and forms a cytoplasmic "sequestosome" where ubiquitinated, mis-folded, or non-functional proteins are stored for autophagic degradation.^{1,2} Tumor cells often utilize autophagy for survival in low nutrient and hypoxic conditions or in response to cancer treatments. Inhibition of p62 action may enhance chemotherapies by disrupting the pro-survival signaling cascades that work to maintain cell integrity and limit apoptosis.^{3,4} p62 functions in concert with tumor necrosis factor receptor associated factor 6 (TRAF6) to mediate activation of nuclear factor kappa-B (NF- κ B) signaling pathway in response to upstream signals involving atypical protein kinase C. It is also an important intermediary in IL-1 signaling to NF- κ B through the specific adaptors RIP and TRAF6.⁵

Overexpression or dysregulation of p62 interactions can result in large cytoplasmic aggregates including those found in aggregation diseases affecting the brain and liver. These include Lewy bodies in Parkinson's disease, neurofibrillary tangles in Alzheimer's disease, toxic aggregates in hepatocellular carcinomas, and amyloid deposits present in wide variety of clinical diseases.^{4,6} Therefore, proper p62-mediated regulation of intracellular protein processing is essential to maintain cellular homeostasis in degenerative diseases.

The MSD Total p62 (SQSTM1) assay is available on 96-well 4-spot plates. This datasheet outlines the performance of the assay.

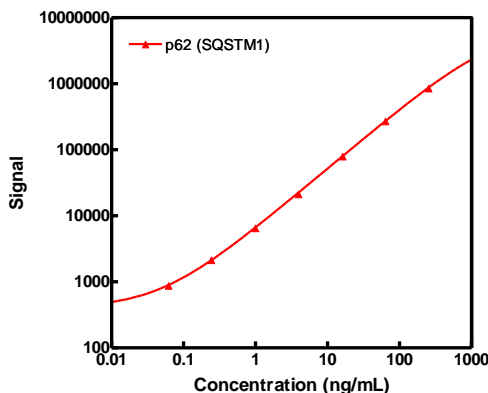
Assay Sensitivity

p62 (SQSTM1)	
LLOD (ng/mL)	0.10

The lower limit of detection (LLOD) is a calculated concentration based on a signal 2.5 standard deviations above the blank (zero) calibrator.

Typical Data

The following standard curve illustrates the dynamic range of the assay. Recombinant p62 (SQSTM1) protein was used to generate the data. Actual signals will vary. Best quantification of unknown samples will be achieved by generating a standard curve for each plate using a minimum of 2 replicates of standards.



Conc. (ng/mL)	p62 (SQSTM1)	
	Average Signal	%CV
0	320	6.2
0.061	880	13.8
0.24	2159	4.9
0.98	6595	2.2
3.9	21 491	1.9
16	80 189	1.6
63	273 990	4.4
250	861 705	2.4

MSD Phosphoprotein Assays

MSD Advantage

- **Multiplexing:** Multiple analytes can be measured in one well using typical sample amounts of 25 µg/well or less without compromising speed or performance
- **Large dynamic range:** Linear range of up to five logs enables the measurement of native levels of biomarkers in normal and diseased samples without multiple dilutions
- **Minimal background:** The stimulation mechanism (electricity) is decoupled from the signal (light)
- **Simple protocols:** Only labels near the electrode surface are detected, enabling no-wash assays
- **Flexibility:** Labels are stable, non-radioactive, and conveniently conjugated to biological molecules
- **High sensitivity and precision:** Multiple excitation cycles of each label enhance light levels and improve sensitivity

For a complete list of products, please visit our website at www.mesoscale.com.

References

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