

**Datasheet for 600-401-HB8****SQSTM1/p62 Antibody****Overview**

|                      |                                                 |
|----------------------|-------------------------------------------------|
| <b>Description:</b>  | Anti-SQSTM1/p62 (RABBIT) Antibody - 600-401-HB8 |
| <b>Item No.:</b>     | 600-401-HB8                                     |
| <b>Size:</b>         | 100 µg                                          |
| <b>Applications:</b> | ELISA, IF, IHC, WB                              |
| <b>Reactivity:</b>   | Human, Mouse                                    |
| <b>Host Species:</b> | Rabbit                                          |

**Product Details**

**Background:** SQSTM1(Sequestosome 1)/p62 is an adapter protein which binds ubiquitin and regulates signaling cascades through ubiquitination. It functions as a bridge between polyubiquitinated cargo and autophagosomes and interacts directly with both the cargo to become degraded and an autophagy modifier of the MAP1 LC3 family. Along with WDFY3, SQSTM1 is involved in the formation and autophagic degradation of cytoplasmic ubiquitin-containing inclusions (p62 bodies, ALIS/aggresome-like induced structures) and is required to recruit ubiquitinated proteins to PML bodies in the nucleus. It may regulate the activation of NFκB1 by TNF-alpha, nerve growth factor (NGF) and interleukin-1 and may play a role in titin/TTN downstream signaling in muscle cells. It is an adapter that mediates the interaction between TRAF6 and CYLD. SQSTM1 may be involved in cell differentiation, apoptosis, immune response and regulation of K(+) channels. It is involved in endosome organization by retaining vesicles in the perinuclear cloud: following ubiquitination by RNF26, attracts specific vesicle-associated adapters, forming a molecular bridge that restrains cognate vesicles in the perinuclear region and organizes the endosomal pathway for efficient cargo transport. Mutations in this gene result in frontotemporal dementia and/or amyotrophic lateral sclerosis, and familial Paget disease of bone. Anti-SQSTM1 Antibody is useful for researchers interested in Cancer Research, Neuroscience, and Cytokines & Growth Factor Antibodies.

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Synonyms:</b>     | Rabbit Anti-Sequestosome 1 Antibody, Phosphotyrosine-Independent Ligand For The Lck SH2 Domain Of 62 KDa, EBI3-Associated Protein Of 60 KDa, Ubiquitin-Binding Protein P62, Oxidative Stress Induced Like, EBIAP, OSIL, P60, Phosphotyrosine Independent Ligand For The Lck SH2 Domain P62, EBI3-Associated Protein P60, Paget Disease Of Bone, Sequestosome-1, FTDALS3, NADGP, A170, DMRV, ZIP3, P62B, PDB3, ORCA, P62 |
| <b>Host Species:</b> | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                   |            |
|-------------------|------------|
| <b>Clonality:</b> | Polyclonal |
| <b>Format:</b>    | IgG        |

## Target Details

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name:</b>          | SQSTM1                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Reactivity:</b>         | Human, Mouse                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Immunogen Type:</b>     | Conjugated Peptide                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Immunogen:</b>          | Anti-SQSTM1/p62 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region of human SQSTM1 conjugated to Keyhole Limpet Hemocyanin (KLH).                                                                                                                                                                                     |
| <b>Purity/Specificity:</b> | This affinity purified antibody is directed against human SQSTM1/p62. This product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross-reactivity with the antigen based on 100% homology with the immunizing sequence to human, mouse, rat, and Pongo abelii. Cross reactivity with SQSTM1 from other sources has not been determined. |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"> <li><a href="#">UniProtKB - Q13501</a></li> <li><a href="#">GenelD - 8878</a></li> <li><a href="#">NCBI - NP_001135770.1</a></li> </ul>                                                                                                                                                                                                                                       |

## Application Details

|                             |                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tested Applications:</b> | ELISA, IF, IHC, WB                                                                                                                                                                                                                                                                                                  |
| <b>Application Note:</b>    | Anti-SQSTM1/p62 Antibody has been tested in ELISA, WB, IF, and IHC. Expect a band at ~38, 47kDa in western blot using appropriate tissues and lysates. Positive control used: U87-MG, HeLa, and Mouse liver lysates in western blot; Human skeletal muscle in Immunohistochemistry; and HeLa in immunofluorescence. |
| <b>Assay Dilutions:</b>     | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                                                                                                     |
| <b>ELISA:</b>               | 1:10,000-1:50,000                                                                                                                                                                                                                                                                                                   |
| <b>IF:</b>                  | 5µg/mL                                                                                                                                                                                                                                                                                                              |
| <b>IHC:</b>                 | 1:100                                                                                                                                                                                                                                                                                                               |
| <b>WB:</b>                  | 1:1000                                                                                                                                                                                                                                                                                                              |

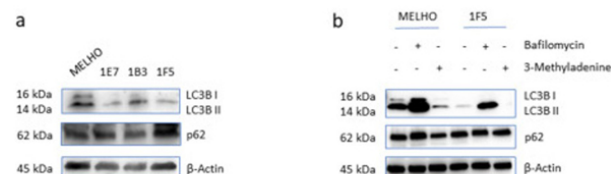
## Formulation

|                        |                                                            |
|------------------------|------------------------------------------------------------|
| <b>Physical State:</b> | Liquid (sterile filtered)                                  |
| <b>Concentration:</b>  | 1.0 mg/ml by UV absorbance at 280 nm                       |
| <b>Buffer:</b>         | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 |
| <b>Preservative:</b>   | 0.01% (w/v) Sodium Azide                                   |
| <b>Stabilizer:</b>     | None                                                       |

## Shipping & Handling

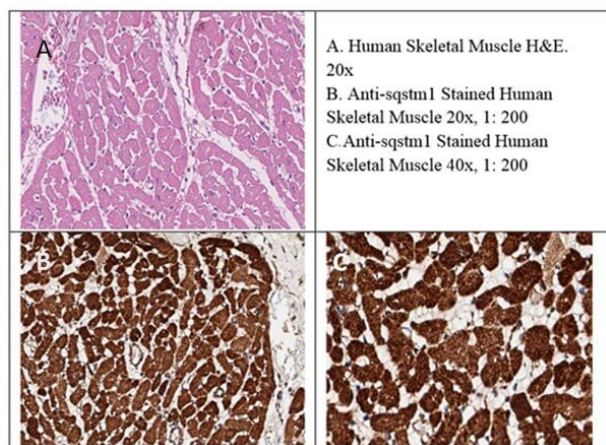
|                            |                                                                                                                                                                                                                                                                                                                                               |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shipping Condition:</b> | Dry Ice                                                                                                                                                                                                                                                                                                                                       |
| <b>Storage Condition:</b>  | Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. |
| <b>Expiration:</b>         | Expiration date is one (1) year from date of receipt.                                                                                                                                                                                                                                                                                         |

## Images



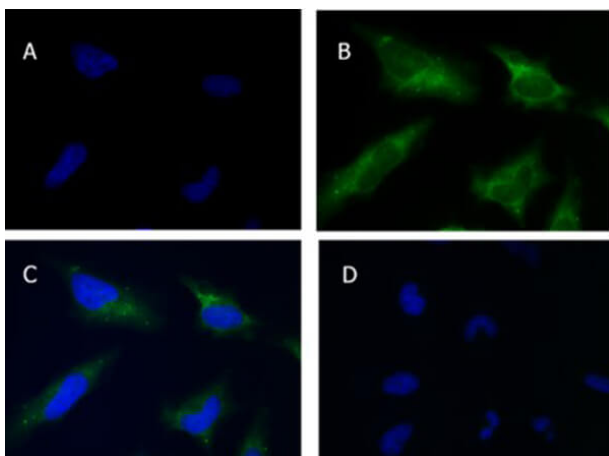
### Western Blot

Impact of RUNX2 expression on autophagy markers in melanoma cells. (a) Western blots of 1A/1B-light chain 3 (LC3) and p62 in MELHO and in the 1E7, 1B3, and 1F5 RUNX2 KO melanoma cell lines. (b) Western blots (left) and densitometry analyses (right) of LC3 and p62 protein levels in MELHO and in the 1F5 RUNX2 KO cell line mock-treated or treated with bafilomycin A1 or 3-methyladenine. Fig 5. PMID: 38474372



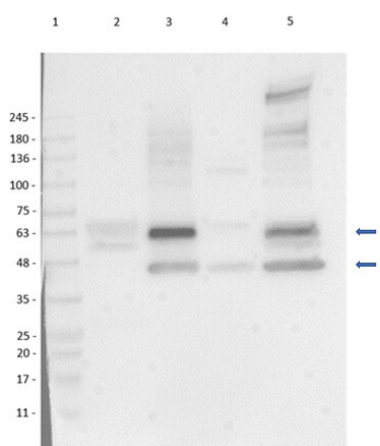
### Immunohistochemistry

Immunohistochemistry of Rabbit Anti-SQSTM1/p62 Antibody. Tissue: Human Skeletal Muscle. Antigen Retrieval: HIER using Citrate buffer for 20 mins. Primary Antibody: Anti-SQSTM1/p62 at 1:200 for 30 mins at RT. Secondary Antibody: Anti-Rabbit Poly-HRP-IgG Ready to use for 8 min at RT. Counterstain: Hematoxylin. Result Analysis: shows intense cytoplasmic staining of myocytes consistent with that described in the Human Protein Atlas.



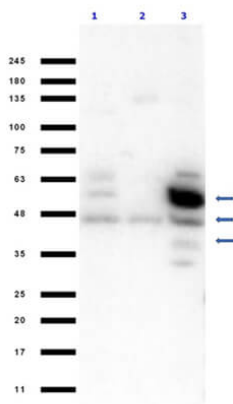
### Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-SQSTM1/p62 Antibody. Cells: HeLa cells. Fixative: 4% PFA. Permeabilization: 0.3% Triton X-100. Primary Antibody: Anti-SQSTM1 at 5µg/mL overnight at 2-8°C. Secondary Antibody: Donkey Anti-Rabbit IgG DyLight™488 (p/n 611-741-127) at 5µg/mL for 60mins at RT. Nuclear Counterstain: DAPI. Staining: (A) DAPI, (B) Anti-SQSTM1 and DyLight™488, (C) Merge A+B, (D) secondary only. Predicted localization: Nucleus, cytosol, lysosome, vesicle. Result Analysis: Punctate staining indicative of lysosomal/vesicle staining.



### Western Blot

Western Blot of Rabbit Anti-SQSTM1/p62 Antibody. Lane 1: Opal Prestain Molecular Weight Marker (p/n MB-210-0500). Lane 2: Human Skeletal muscle whole tissue lysate [+]. Lane 3: U87-MG whole cell lysate [+]. Lane 4: MOLT4 whole cell lysate [-] (p/n W09-001-GK2). Lane 5: HeLa whole cell lysate [+] (p/n W09-000-364). Load: 35µg lysate per lane. Primary Antibody: Anti-SQSTM1 at 1:1000 overnight at 2-8°C. Secondary Antibody: Goat Anti-Rabbit IgG HRP (p/n 611-103-122) at 1:40,000 for 60 mins at RT. Block: 5% BLOTTO/TBST (p/n B501-0500). Predicted MW: 38, 48 kDa. Observed MW: ~45, 60kDa. Protein undergoes acetylation, Isopeptide bond, Phosphoprotein, and Ubl conjugation.



### Western Blot

Western Blot of Rabbit Anti-SQSTM1/p62 Antibody. Opal Prestain Molecular Weight Marker (p/n MB-210-0500). Lane 1: HEK293T whole cell lysate (p/n W09-001-GX5). Lane 2: Jurkat whole cell lysate (p/n W09-001-370). Lane 3: Mouse liver normal tissue whole tissue lysate (p/n W10-000-T020). Load: 35µg lysate per lane. Primary Antibody: Anti-SQSTM1 at 1:1000 overnight at 2-8°C. Secondary Antibody: Goat Anti-Rabbit IgG HRP (p/n 611-103-122) at 1:70,000 for 60 mins at RT. Block: BlockOut Buffer (p/n MB-073). Predicted MW: 38, 48 kDa. Observed MW: ~38, 47, 60kDa. Protein undergoes acetylation, Isopeptide bond, Phosphoprotein, and Ubl conjugation.

## References

- Carbonare LD et al. Exploring the Interplay of RUNX2 and CXCR4 in Melanoma Progression. *Cells*. (2024)

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.