

SQSTM1/p62 (Phospho Thr269/Ser272) Rabbit pAb

CatalogNo: YP1506

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, IHC

MW

- 48kD (Calculated)
- 60kD (Observed)

Isotype

- IgG

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-2000

IHC 1:50-300

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen Synthesized phospho peptide around human SQSTM1 (Thr269 and Ser272)

Specificity This antibody detects endogenous levels of SQSTM1/p62 only when phosphorylated at Thr269/Ser272, and dually phosphorylated at two sites.

Target Information

Gene name SQSTM1 ORCA OSIL

Protein Name SQSTM1/p62 (Thr269/Ser272)

Organism	Gene ID	UniProt ID
Human	8878;	Q13501;
Mouse	18412;	Q64337;
Rat	113894;	O08623;

Cellular Localization

Cytoplasm, cytosol . Late endosome. Lysosome. Cytoplasmic vesicle, autophagosome. Nucleus. Endoplasmic reticulum. Nucleus, PML body . Cytoplasm, myofibril, sarcomere . In cardiac muscle, localizes to the sarcomeric band (By similarity). Commonly found in inclusion bodies containing polyubiquitinated protein aggregates. In neurodegenerative diseases, detected in Lewy bodies in Parkinson disease, neurofibrillary tangles in Alzheimer disease, and HTT aggregates in Huntington disease. In protein aggregate diseases of the liver, found in large amounts in Mallory bodies of alcoholic and nonalcoholic steatohepatitis, hyaline bodies in hepatocellular carcinoma, and in SERPINA1 aggregates. Enriched in Rosenthal fibers of pilocytic astrocytoma. In the cytoplasm, observed in both membrane-free ubiquitin-containing protein aggregates (sequestosomes) and membrane-surrounded autophagosomes. Colocalizes with TRIM13 in the perinuclear endoplasmic reticulum. Colocalizes with TRIM5 in cytoplasmic bodies. When nuclear export is blocked by treatment with leptomycin B, accumulates in PML bodies. .

Tissue specificity Ubiquitously expressed.

Function

Disease: Defects in SQSTM1 are a cause of sporadic and familial Paget disease of bone (PDB) [MIM:602080]. PDB is a metabolic bone disease affecting the axial skeleton and characterized by focal areas of increased and disorganized bone turn-over due to activated osteoclasts. Manifestations of the disease include bone pain, deformity, pathological fractures, deafness, neurological complications and increased risk of osteosarcoma. PDB is a chronic disease affecting 2 to 3% of the population above the age of 40 years.

Domain: The OPR domain mediates homooligomerization and interactions with PRKCZ, PRKCI, MAP2K5 and NBR1.

Domain: The UBA domain binds specifically 'Lys-63'-linked polyubiquitin chains of polyubiquitinated substrates. Mediates the interaction with TRIM55.

Domain: The ZZ-type zinc finger mediates the interaction with RIPK1.

Function: Adapter protein which binds ubiquitin and may regulate the activation of NFKB1 by TNF-alpha, nerve growth factor (NGF) and interleukin-1. May play a role in titin/TTN downstream signaling in muscle cells. May regulate signaling cascades through ubiquitination. May be involved in cell differentiation, apoptosis, immune response and regulation of K(+) channels.

Induction: By proteasomal inhibitor PSI and prostaglandin J2 (PGJ2) (at protein level). By Phorbol 12-myristate 13-acetate (PMA).

PTM: Phosphorylated. May be phosphorylated by PRKCZ (By similarity). Phosphorylated in vitro by TTN.

Similarity: Contains 1 OPR domain.

Similarity: Contains 1 UBA domain.

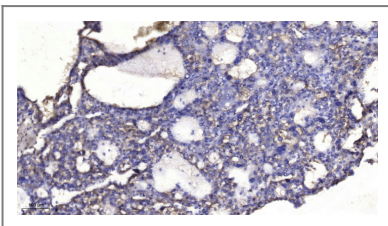
Similarity: Contains 1 ZZ-type zinc finger.

Subcellular location: Sarcomere (By similarity). In cardiac muscles localizes to the sarcomeric band (By similarity). Localizes to late endosomes. May also localize to the nucleus. Accumulates in neurofibrillary tangles and in Lewy bodies of neurons from individuals with Alzheimer and Parkinson disease respectively. Enriched in Rosenthal fibers of pilocytic astrocytoma. In liver cells, accumulates in Mallory bodies associated with alcoholic hepatitis, Wilson disease, Indian childhood cirrhosis and in hyaline bodies associated with hepatocellular carcinoma.

Subunit: Homooligomer or heterooligomer; may form homotypic arrays. Interacts directly with PRKCI and PRKCZ (Probable). Forms ternary complexes with PRKCZ and KCNAB2 or PRKCZ and GABRR3. Also interacts with KCNAB1, GABRR1, GABRR2 and GABRR3. Forms an NGF-induced complex with IKBKB, PRKCI and TRAF6 (By similarity). Interacts with EBI3, LCK, RASA1, PRKCZ, PRKCI, NR2F2, NTRK1, NTRK2, NTRK3, NBR1, MAP2K5, TRIM55 and MAPKAPK5. Interacts with the proteasome subunits PSMD4 and PSMC2. Interacts with K63-polyubiquitinated MAPT/TAU. Interacts with IKBKB through PRKCZ and PRKCI. Interacts with NGFR through TRAF6 and bridges that complex to NTRK1. Forms a complex with MAP2K5 and PRKCZ or PRKCI. Component of a ternary complex with PAWR and PRKCZ. Upon TNF-alpha stimulation, interacts with RIPK1 probably bridging IKBKB to the TNF-R1 complex composed of TNF-R1/TNFRSF1A, TRADD and RIPK1. Forms a complex with JUB/Ajuba, PRKCZ and TRAF6.

Tissue specificity: Ubiquitously expressed.

Validation Data



Immunohistochemical analysis of paraffin-embedded human liver cancer. 1, Antibody was diluted at 1:200 (4°C overnight). 2, Tris-EDTA, pH 9.0 was used for antigen retrieval. 3, Secondary antibody was diluted at 1:200 (room temperature, 45min).

Contact information

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SQSTM1/p62
(Phospho
Thr269/Ser272)
Rabbit pAb

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