SANTA CRUZ BIOTECHNOLOGY, INC.

SQSTM1 (A-6): sc-48402

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The chronic focal skeletal disorder, Paget's disease of bone, affects 2-3% of the population over the age of 60 years. Paget's disease is characterized by increased bone resorption by osteoclasts, followed by abundant new bone formation that is of poor quality. The disease leads to several complications including bone pain and deformities, as well as fissures and fractures. Mutations in the ubiquitin-associated (UBA) domain of the sequestosome 1 protein (SQSTM1), also designated p62 or ZIP, commonly cause Paget's disease, since the UBA is necessary for aggregate sequestration and cell survival.

CHROMOSOMAL LOCATION

Genetic locus: SQSTM1 (human) mapping to 5q35.3; Sqstm1 (mouse) mapping to 11 B1.3.

SOURCE

SQSTM1 (A-6) is a mouse monoclonal antibody raised against amino acids 151-440 of SQSTM1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SQSTM1 (A-6) is available conjugated to agarose (sc-48402 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-48402 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48402 PE), fluorescein (sc-48402 FITC), Alexa Fluor® 488 (sc-48402 AF488), Alexa Fluor® 546 (sc-48402 AF546), Alexa Fluor® 594 (sc-48402 AF594) or Alexa Fluor® 647 (sc-48402 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-48402 AF680) or Alexa Fluor® 790 (sc-48402 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

SQSTM1 (A-6) is recommended for detection of SQSTM1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SQSTM1 siRNA (h): sc-29679, SQSTM1 siRNA (m): sc-29828, SQSTM1 shRNA Plasmid (h): sc-29679-SH, SQSTM1 shRNA Plasmid (m): sc-29828-SH, SQSTM1 shRNA (h) Lentiviral Particles: sc-29679-V and SQSTM1 shRNA (m) Lentiviral Particles: sc-29828-V.

Molecular Weight of SQSTM1: 65 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, HeLa whole cell lysate: sc-2200 or SK-LMS-1 cell lysate: sc-3813.

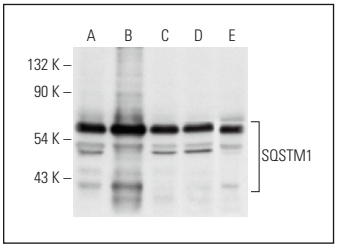
RESEARCH USE

For research use only, not for use in diagnostic procedures.

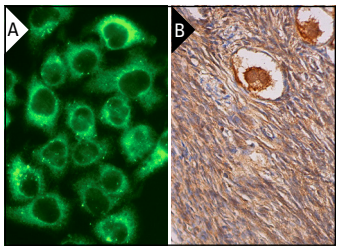
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



SQSTM1 (A-6): sc-48402. Western blot analysis of SQSTM1 expression in SK-LMS-1 (**A**), MDA-MB-231 (**B**), SK-BR-3 (**C**), MCF7 (**D**) and HeLa (**E**) whole cell lysates.



SQSTM1 (A-6): sc-48402. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic staining of follicle cells and ovarian stroma cells and and cytoplasmic and nuclear staining of oocytes (**B**).

SELECT PRODUCT CITATIONS

1. Nogalska, A., et al. 2009. p62/SQSTM1 is overexpressed and prominently accumulated in inclusions of sporadic inclusion-body myositis muscle fibers, and can help differentiating it from polymyositis and dermatomyositis. Acta Neuropathol. 118: 407-413.
2. Polletta, L., et al. 2015. SIRT5 regulation of ammonia-induced autophagy and mitophagy. Autophagy 11: 253-270.
3. Yan, L., et al. 2018. Inhibitory effect of PXR on ammonia-induced hepatocyte autophagy via P53. Toxicol. Lett. 295: 153-161.
4. Zhou, L., et al. 2019. Brefeldin A inhibits colorectal cancer growth by triggering Bip/Akt-regulated autophagy. FASEB J. 33: 5520-5534.
5. Wang, M., et al. 2020. Cross-talk between autophagy and apoptosis regulates testicular injury/recovery induced by cadmium via PI3K with mTOR-independent pathway. Cell Death Dis. 11: 46.
6. Zhang, L., et al. 2021. Graphene oxide induces dose-dependent lung injury in rats by regulating autophagy. Exp. Ther. Med. 21: 462.
7. Zhou, J., et al. 2022. Simultaneous treatment with sorafenib and glucose restriction inhibits hepatocellular carcinoma *in vitro* and *in vivo* by impairing SIAH1-mediated mitophagy. Exp. Mol. Med. 54: 2007-2021.
8. Zhu, Y., et al. 2023. FAAH served a key membrane-anchoring and stabilizing role for NLRP3 protein independently of the endocannabinoid system. Cell Death Differ. 30: 168-183.
9. Vafiadaki, E., et al. 2024. The phospholamban R14del generates pathogenic aggregates by impairing autophagosome-lysosome fusion. Cell. Mol. Life Sci. 81: 450.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.