SANTA CRUZ BIOTECHNOLOGY, INC.

SQSTM1 (D-3): sc-28359

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.

SOURCE

SQSTM1 (D-3) 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 (D-3) is available conjugated to agarose (sc-28359 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-28359 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28359 PE), fluorescein (sc-28359 FITC), Alexa Fluor® 488 (sc-28359 AF488), Alexa Fluor® 546 (sc-28359 AF546), Alexa Fluor® 594 (sc-28359 AF594) or Alexa Fluor® 647 (sc-28359 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28359 AF680) or Alexa Fluor® 790 (sc-28359 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

SQSTM1 (D-3) is recommended for detection of sequestosome 1 of 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 shRNA Plasmid (h): sc-29679-SH and SQSTM1 shRNA (h) Lentiviral Particles: sc-29679-V.

Molecular Weight of SQSTM1: 65 kDa.

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

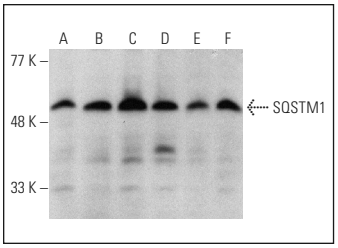
STORAGE

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

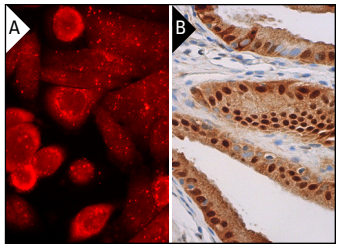
RESEARCH USE

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

DATA



SQSTM1 (D-3) HRP: sc-28359 HRP. Direct western blot analysis of SQSTM1 expression in SK-LMS-1 (**A**), HeLa (**B**), MDA-MB-231 (**C**), SK-BR-3 (**D**), MDA-MB-468 (**E**) and Ca Ski (**F**) whole cell lysates.



SQSTM1 (D-3) Alexa Fluor® 594: sc-28359 AF594. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic and nuclear localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). SQSTM1 (D-3): sc-28359. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and nuclear staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Selby, P.L., et al. 2006. Canine distemper virus induces human osteoclastogenesis through NFκB and sequestosome 1/p62 activation. J. Bone Miner. Res. 21: 1750-1756.
2. Saito, Y., et al. 2018. Amino acid starvation culture condition sensitizes EGFR-expressing cancer cell lines to gefitinib-mediated cytotoxicity by inducing atypical necroptosis. Int. J. Oncol. 52: 1165-1177.
3. Sun, T., et al. 2018. SIRT1 induces epithelial-mesenchymal transition by promoting autophagic degradation of E-cadherin in melanoma cells. Cell Death Dis. 9: 136.
4. Park, J.M., et al. 2018. ULK1 phosphorylates Ser30 of BECN1 in association with ATG14 to stimulate autophagy induction. Autophagy 14: 584-597.
5. Hui, K.Y., et al. 2018. Functional variants in the LRRK2 gene confer shared effects on risk for Crohn's disease and Parkinson's disease. Sci. Transl. Med. 10 pii: eaai7795.
6. Alegre, F., et al. 2018. Role of p62/SQSTM1 beyond autophagy: a lesson learned from drug-induced toxicity *in vitro*. Br. J. Pharmacol. 175: 440-455.
7. Ji, J., et al. 2018. XIAP limits autophagic degradation of Sox2 and is a therapeutic target in nasopharyngeal carcinoma stem cells. Theranostics 8: 1494-1510.
8. Hedberg-Oldfors, C., et al. 2018. Polyglucosan myopathy and functional characterization of a novel GYG1 mutation. Acta Neurol. Scand. 137: 308-315.
9. Wang, L., et al. 2018. LIMD1 is induced by and required for LMP1 signaling, and protects EBV-transformed cells from DNA damage-induced cell death. Oncotarget 9: 6282-6297.

PROTOCOLS

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