SANTA CRUZ BIOTECHNOLOGY, INC.

Tom1L-1 (3F12): sc-130565

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Tom1L-1 (target of myb1 (chicken)-like 1), also known as SRCASM or OK/KNS-CL.3, is a 476 amino acid Golgi apparatus protein belonging to the TOM1 family and is a member of the multivesicular body (MVB) sorting machinery. Containing a GAT domain and a VHS domain, Tom1L-1 interacts with Fyn, GRB2, PI 3-kinase p85α and various signaling proteins when phosphorylated. GAT domain of Tom1L-1 binds ubiquitin, suggesting participation in the sorting of ubiquitinated proteins into MVBs. Tom1L-1 may act as an adapter protein involved in signaling pathways and may promote Fyn activation, possibly by disrupting intramolecular SH3-dependent interactions. As an interactor and a substrate of Src tyrosine kinases (SFK), Tom1L-1 is considered a novel mechanism involved in negative regulation of SFK mitogenic and transforming signals. Tom1L-1 modulates SFK partitioning at the plasma membrane. It is suggested that Tom1L-1 functions as an anti-oncogene by inhibiting the formation of squamous cell carcinomas in skin.

REFERENCES

1. Seykora, J.T., et al. 2002. Srcasm: a novel Src activating and signaling molecule. J. Biol. Chem. 277: 2812-2822.
2. Puertollano, R. 2005. Interactions of Tom1L-1 with the multivesicular body sorting machinery. J. Biol. Chem. 280: 9258-9264.
3. Franco, M., et al. 2006. The adaptor protein Tom1L-1 is a negative regulator of Src mitogenic signaling induced by growth factors. Mol. Cell. Biol. 26: 1932-1947.
4. Li, W., et al. 2007. Srcasm corrects Fyn-induced epidermal hyperplasia by kinase down-regulation. J. Biol. Chem. 282: 1161-1169.
5. Collin, G., et al. 2007. The Tom1L1-clathrin heavy chain complex regulates membrane partitioning of the tyrosine kinase Src required for mitogenic and transforming activities. Mol. Cell. Biol. 27: 7631-7640.

CHROMOSOMAL LOCATION

Genetic locus: TOM1L1 (human) mapping to 17q22; Tom1l1 (mouse) mapping to 11 D.

SOURCE

Tom1L-1 (3F12) is a mouse monoclonal antibody raised against recombinant Tom1L-1 of mouse 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.

Tom1L-1 (3F12) is available conjugated to agarose (sc-130565 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-130565 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-130565 PE), fluorescein (sc-130565 FITC), Alexa Fluor® 488 (sc-130565 AF488), Alexa Fluor® 546 (sc-130565 AF546), Alexa Fluor® 594 (sc-130565 AF594) or Alexa Fluor® 647 (sc-130565 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-130565 AF680) or Alexa Fluor® 790 (sc-130565 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

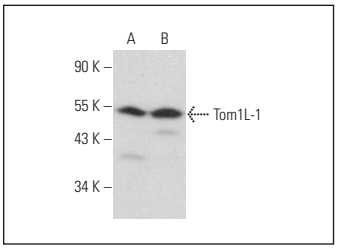
Tom1L-1 (3F12) is recommended for detection of Tom1L-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Tom1L-1 siRNA (h): sc-76708, Tom1L-1 siRNA (m): sc-76709, Tom1L-1 shRNA Plasmid (h): sc-76708-SH, Tom1L-1 shRNA Plasmid (m): sc-76709-SH, Tom1L-1 shRNA (h) Lentiviral Particles: sc-76708-V and Tom1L-1 shRNA (m) Lentiviral Particles: sc-76709-V.

Molecular Weight of Tom1L-1: 53 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136 or HeLa whole cell lysate: sc-2200.

DATA



Tom1L-1 (3F12): sc-130565. Western blot analysis of Tom1L-1 expression in HEK293 (**A**) and HeLa (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. de Souza Marinho do Nascimento, D., et al. 2017. *Baccharis trimera* (Less.) DC exhibits an anti-adipogenic effect by inhibiting the expression of proteins involved in adipocyte differentiation. Molecules 22 pii: E972.
2. Yokobori, K., et al. 2020. Phosphorylation of vaccinia-related kinase 1 at threonine 386 transduces glucose stress signal in human liver cells. Biosci. Rep. 40 pii: BSR20200498.
3. Zhang, Y., et al. 2020. BPA disrupts 17-estradiol-mediated hepatic protection against ischemia/reperfusion injury in rat liver by upregulating the Ang II/AT1R signaling pathway. Mol. Med. Rep. E-published.

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.