SANTA CRUZ BIOTECHNOLOGY, INC.

TBL1 (H-3): sc-137006

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The Power to Question

BACKGROUND

TBL1, for transducin β-like 1, is a ubiquitously expressed protein that contains six distinct β-transducin repeats, known also as WD40 repeats, within the C-terminal domain. Transducin β-like 1 Y-linked protein (TBL1Y), also designated F-box-like/WD-repeat protein, and transducin β-like 1 X protein (TBL1X), also known as SMAP55, are nuclear F-box-like proteins. They are important in the ubiquitin/19S proteasome complex recruitment to nuclear receptor-regulated transcription units. TBL1X is a part of the N-CoR repressor complex together with N-CoR1, N-CoR2, HDAC3, TBL1R, CORO2A and GPS2. It is also a component of the E3 ubiquitin ligase complex. TBL1X, which can interact with Histones H2B, H3A and H4, is similar to TBL1Y but is localized on chromosome Xp22.31. Defects in TBL1X may cause an X-linked human disorder called ocular albinism with late-onset sensorineural deafness (OASD). TBL1Y is an X-degenerate gene that is homologous to TBL1X. TBL1Y, a single-copy gene, localizes to human chromosome Yp11.2 in the male-specific region of chromosome Y (MSY). This region of the Y chromosome does not engage in X-Y crossover events. TBL1Y is primarily expressed in fetal brain and prostate. TBL1X and TBL1Y are crucial in nuclear receptor mediated transcription activation.

REFERENCES

1. Disteche, C.M., et al. 1998. Mapping of the murine TBL1 gene reveals a new rearrangement between mouse and human X chromosomes. Mamm. Genome 9: 1062-1064.
2. Bassi, M.T., et al. 1999. X-linked late-onset sensorineural deafness caused by a deletion involving OA1 and a novel gene containing WD40 repeats. Am. J. Hum. Genet. 64: 1604-1616.

CHROMOSOMAL LOCATION

Genetic locus: TBL1X (human) mapping to Xp22.31, TBL1Y (human) mapping to Yp11.2; Tbl1x (mouse) mapping to X A7.3.

SOURCE

TBL1 (H-3) is a mouse monoclonal antibody raised against amino acids 211-577 of TBL1X 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-137006 X, 200 µg/0.1 ml.

TBL1 (H-3) is available conjugated to agarose (sc-137006 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-137006 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137006 PE), fluorescein (sc-137006 FITC), Alexa Fluor® 488 (sc-137006 AF488), Alexa Fluor® 546 (sc-137006 AF546), Alexa Fluor® 594 (sc-137006 AF594) or Alexa Fluor® 647 (sc-137006 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137006 AF680) or Alexa Fluor® 790 (sc-137006 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

TBL1 (H-3) is recommended for detection of TBL1X of mouse, rat and human origin and TBL1Y 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

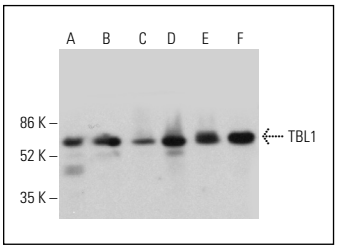
Suitable for use as control antibody for TBL1X siRNA (m): sc-38889, TBL1X shRNA Plasmid (m): sc-38889-SH and TBL1X shRNA (m) Lentiviral Particles: sc-38889-V.

TBL1 (H-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

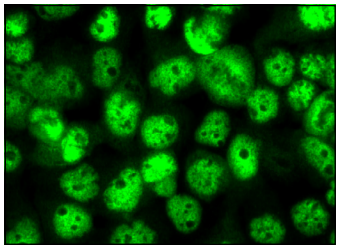
Molecular Weight of TBL1: 57 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, F9 cell lysate: sc-2245 or Hep G2 cell lysate: sc-2227.

DATA



TBL1 (H-3): sc-137006. Western blot analysis of TBL1 expression in HeLa (**A**), MCF7 (**B**), Hep G2 (**C**), HEK293 (**D**), NIH/3T3 (**E**) and F9 (**F**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



TBL1 (H-3): sc-137006. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Dreer, M., et al. 2016. Interaction of NCOR/SMRT repressor complexes with papillomavirus E8^E2C proteins inhibits viral replication. PLoS Pathog. 12: e1005556.
2. Sharma, N., et al. 2019. ARNT2 tunes activity-dependent gene expression through NCoR2-mediated repression and NPAS4-mediated activation. Neuron 102: 390-406.e9.
3. Wang, Z., et al. 2020. SETD5-coordinated chromatin reprogramming regulates adaptive resistance to targeted pancreatic cancer therapy. Cancer Cell 37: 834-849.e13.
4. Kuehner, F., et al. 2023. *Mus musculus* papillomavirus 1 E8^E2 represses expression of late protein E4 in basal-like keratinocytes via NCoR/SMRT-HDAC3 co-repressor complexes to enable wart formation *in vivo.* mBio 14: e0069623.

STORAGE

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