SANTA CRUZ BIOTECHNOLOGY, INC.

LZTR1 (E-12): sc-390166

BACKGROUND

LZTR1, leucine-zipper-like transcriptional regulator 1, is a member of the BTB-Kelch superfamily. LZTR1 contains two BTB (POZ) domains and six Kelch repeats. The BTB (broad-complex, tramtrack and bric a brac) domain, also known as the POZ (poxvirus and zinc finger) domain, is an N-terminal homodimerization domain that contains multiple copies of Kelch repeats and/or C_2H_2-type zinc fingers. Proteins that contain BTB domains are thought to be involved in transcriptional regulation via control of chromatin structure and function. LZTR1 is believed to function as a transcriptional regulator during embryogenesis. LZTR1 is expressed in fetal brain, heart, kidney, liver and lung and is found exclusively on the cytoplasmic surface of the Golgi network. LZTR1 likely contributes to the etiology of velocardiofacial/DiGeorge syndrome, as the LZTR1 gene lies within a chromosomal deletion region associated with the disease.

REFERENCES

1. Torg, J.S., et al. 1969. Hereditary multicentric osteolysis with recessive transmission: a new syndrome. J. Pediatr. 75: 243-252.
2. Dodson, W.E., et al. 1969. The DiGeorge syndrome. Lancet 1: 574-575.

CHROMOSOMAL LOCATION

Genetic locus: LZTR1 (human) mapping to 22q11.21; Lztr1 (mouse) mapping to 16 A3.

SOURCE

LZTR1 (E-12) is a mouse monoclonal antibody raised against a peptide mapping near the N-terminus of LZTR1 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-390166 X, 200 µg/0.1 ml.

LZTR1 (E-12) is available conjugated to agarose (sc-390166 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390166 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390166 PE), fluorescein (sc-390166 FITC), Alexa Fluor® 488 (sc-390166 AF488), Alexa Fluor® 546 (sc-390166 AF546), Alexa Fluor® 594 (sc-390166 AF594) or Alexa Fluor® 647 (sc-390166 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390166 AF680) or Alexa Fluor® 790 (sc-390166 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390166 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

LZTR1 (E-12) is recommended for detection of LZTR1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LZTR1 (E-12) is also recommended for detection of LZTR1 in additional species, including equine, canine, bovine and porcine.

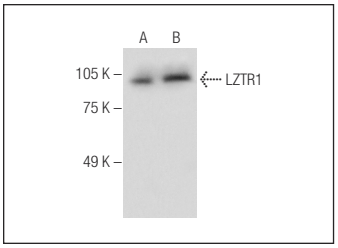
Suitable for use as control antibody for LZTR1 siRNA (h): sc-75720, LZTR1 siRNA (m): sc-149200, LZTR1 shRNA Plasmid (h): sc-75720-SH, LZTR1 shRNA Plasmid (m): sc-149200-SH, LZTR1 shRNA (h) Lentiviral Particles: sc-75720-V and LZTR1 shRNA (m) Lentiviral Particles: sc-149200-V.

LZTR1 (E-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

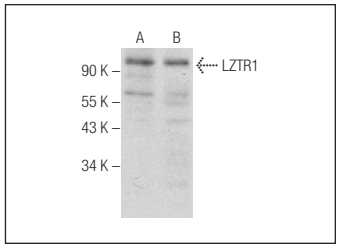
Molecular Weight of LZTR1: 94 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, KNRK whole cell lysate: sc-2214 or WI-38 whole cell lysate: sc-364260.

DATA



LZTR1 (E-12): sc-390166. Western blot analysis of LZTR1 expression in KNRK (**A**) and WI-38 (**B**) whole cell lysates.



LZTR1 (E-12): sc-390166. Western blot analysis of LZTR1 expression in KNRK (**A**) and WI-38 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Umeki, I., et al. 2019. Delineation of LZTR1 mutation-positive patients with Noonan syndrome and identification of LZTR1 binding to RAF1-PPP1CB complexes. Hum. Genet. 138: 21-35.
2. Cuevas-Navarro, A., et al. 2022. Cross-species analysis of LZTR1 loss-of-function mutants demonstrates dependency to RIT1 orthologs. Elife 11: e76495.
3. Abe, T., et al. 2023. LZTR1 deficiency exerts high metastatic potential by enhancing sensitivity to EMT induction and controlling KLHL12-mediated collagen secretion. Cell Death Dis. 14: 556.
4. Damianou, A., et al. 2024. Oncogenic mutations of KRAS modulate its turnover by the CUL3/LZTR1 E3 ligase complex. Life Sci Alliance 7: e202302245.

RESEARCH USE

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