SANTA CRUZ BIOTECHNOLOGY, INC.

LZTR1 (D-1): sc-390731

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.
3. Bardwell, V.J., et al. 1994. The POZ domain: a conserved protein-protein interaction motif. Genes Dev. 8: 1664-1677.
4. Zollman, S., et al. 1994. The BTB domain, found primarily in zinc finger proteins, defines an evolutionarily conserved family that includes several developmentally regulated genes in *Drosophila*. Proc. Natl. Acad. Sci. USA 91: 10717-10721.
5. Ahmad, K.F., et al. 1998. Crystal structure of the BTB domain from PLZF. Proc. Natl. Acad. Sci. USA 95: 12123-12128.
6. Rual, J.F., et al. 2005. Towards a proteome-scale map of the human protein-protein interaction network. Nature 437: 1173-1178.
7. Nacak, T.G., et al. 2006. The BTB-kelch protein LZTR1 is a novel Golgi protein that is degraded upon induction of apoptosis. J. Biol. Chem. 281: 5065-5071.

CHROMOSOMAL LOCATION

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

SOURCE

LZTR1 (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 58-81 of LZTR1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-390731 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-390731 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

LZTR1 (D-1) 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 (D-1) is also recommended for detection of LZTR1 in additional species, including equine, canine, bovine and porcine.

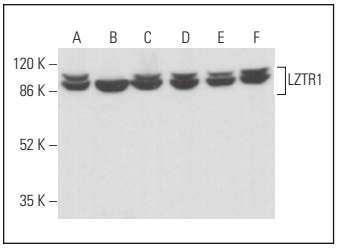
Suitable for use as control antibody for LZTR1 siRNA (h): sc-75720, LZTR1 siRNA (m): sc-149200, LZTR1 shRNA Plasmid (h): sc-75720-SH, LZTR1 shRNA Plasmid (m): sc-149200-SH, LZTR1 shRNA (h) Lentiviral Particles: sc-75720-V and LZTR1 shRNA (m) Lentiviral Particles: sc-149200-V.

LZTR1 (D-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

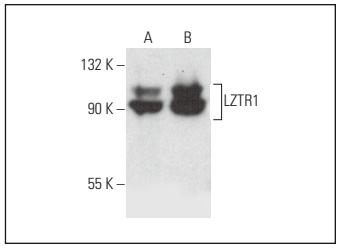
Molecular Weight of LZTR1: 94 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, SH-SY5Y cell lysate: sc-3812 or K-562 whole cell lysate: sc-2203.

DATA



LZTR1 (D-1): sc-390731. Western blot analysis of LZTR1 expression in SH-SY5Y (**A**), K-562 (**B**), 3T3-L1 (**C**), NIH/3T3 (**D**), A-10 (**E**) and C3H/10T1/2 (**F**) whole cell lysates.



LZTR1 (D-1): sc-390731. Western blot analysis of LZTR1 expression in WI-38 (**A**) and KNRK (**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.

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.

PROTOCOLS

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