SANTA CRUZ BIOTECHNOLOGY, INC.

LZIP (H-7): sc-515434

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The Power to Question

BACKGROUND

HCF-1 is a cellular protein required by VP16, a viral tegument, to activate the herpes simplex virus (HSV) immediate-early genes. In addition to playing an essential role in cell proliferation, HCF-1 also functions as a coactivator for the basic leucine zipper transcription factor LZIP (also designated Luman or CREB3). Both LZIP and VP16 contain the binding motif (D/E) HXY (S/A), which is recognized by an amino terminal β-propeller domain in HCF-1. LZIP, a member of the ATF/CREB family, is a type II membrane-associated glycoprotein that is ubiquitously expressed in adult and fetal tissues. LZIP associates with the endoplasmic reticulum, where it sequesters most of the cellular HCF-1. Like other CREB/ATF family members, LZIP activates transcription from genes containing cyclic AMP response elements (CREs). LZIP activity is repressed by the inhibitory interaction of HCLP-1.

REFERENCES

1. Lu, R., et al. 1997. Luman, a new member of the CREB/ATF family, binds to herpes simplex virus VP16-associated host cellular factor. Mol. Cell. Biol. 17: 5117-5126.
2. Lu, R., et al. 1998. The herpesvirus transactivator VP16 mimics a human basic domain leucine zipper protein, luman, in its interaction with HCF. J. Virol. 72: 6291-6297.
3. Zhou, H.J., et al. 2001. Inhibition of LZIP-mediated transcription through direct interaction with a novel host cell factor-like protein. J. Biol. Chem. 276: 28933-28938.

CHROMOSOMAL LOCATION

Genetic locus: Creb3 (mouse) mapping to 4 B1.

SOURCE

LZIP (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 29-54 near the N-terminus of LZIP 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-515434 X, 200 µg/0.1 ml.

LZIP (H-7) is available conjugated to agarose (sc-515434 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515434 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515434 PE), fluorescein (sc-515434 FITC), Alexa Fluor® 488 (sc-515434 AF488), Alexa Fluor® 546 (sc-515434 AF546), Alexa Fluor® 594 (sc-515434 AF594) or Alexa Fluor® 647 (sc-515434 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515434 AF680) or Alexa Fluor® 790 (sc-515434 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515434 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

LZIP (H-7) is recommended for detection of LZIP of mouse 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 LZIP siRNA (m): sc-37703, LZIP shRNA Plasmid (m): sc-37703-SH and LZIP shRNA (m) Lentiviral Particles: sc-37703-V.

LZIP (H-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

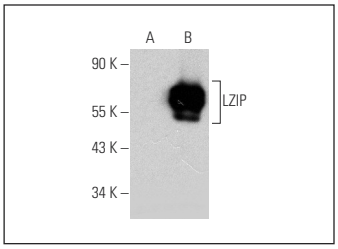
Molecular Weight of LZIP: 44 kDa.

Positive Controls: LZIP (m): 293T Lysate: sc-125570.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



LZIP (H-7): sc-515434. Western blot analysis of LZIP expression in non-transfected: sc-117752 (**A**) and mouse LZIP transfected: sc-125570 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Howley, B.V., et al. 2018. A CREB3-regulated ER-Golgi trafficking signature promotes metastatic progression in breast cancer. Oncogene 37: 1308-1325.

STORAGE

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