# SANTA CRUZ BIOTECHNOLOGY, INC.

# LZIP (H-7): sc-515434



## 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  $\beta$ -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

- 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.
- 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  $\mu$ g lgG<sub>1</sub> 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  $\mu$ g/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<sup>®</sup> 488 (sc-515434 AF488), Alexa Fluor<sup>®</sup> 546 (sc-515434 AF546), Alexa Fluor<sup>®</sup> 594 (sc-515434 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-515434 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-515434 AF680) or Alexa Fluor<sup>®</sup> 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  $\mu$ g 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  $\mu$ g per 100-500  $\mu$ g 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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> 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.

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