SANTA CRUZ BIOTECHNOLOGY, INC.

BRIDGE-1 (ZZ07): sc-100996

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

BRIDGE-1, a protein homologous to a previously cloned proteasome subunit p27 is important in regulating Insulin and other islet genes in the pancreas. BRIDGE-1 is highly expressed in pancreatic β-cells and is predominantly located in the nucleus, although lower levels are expressed in the cytoplasm. BRIDGE-1 contains a conserved PDZ-like domain that mediates protein-protein interactions in a variety of intracellular signaling processes, including the transactivational activity of E2A. One mechanism of the activation of gene transcription in pancreatic β-cells is the interaction of E2A with coactivating proteins such as CBP, p300 and BRIDGE-1. The interaction of E12 and E47, members of the E2A family of transcription factors, with the PDZ-domain of BRIDGE-1 suggest a novel mechanism for Insulin gene regulation.

REFERENCES

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2. Cordier-Bussat, M., Morel, C. and Philippe, J. 1995. Homologous DNA sequences and cellular factors are implicated in the control of Glucagon and Insulin gene expression. Mol. Cell. Biol. 15: 3904-3916.
3. Saras, J. and Heldin, C.H. 1996. PDZ domains bind carboxy-terminal sequences of target proteins. Trends Biochem. Sci. 21: 455-458.
4. Eckner, R., Yao, T.P., Oldread, E. and Livingston, D.M. 1996. Interaction and functional collaboration of p300/CBP and bHLH proteins in muscle and B-cell differentiation. Genes Dev. 10: 2478-2490.
5. Watanabe, T.K., Saito, A., Suzuki, M., Fujiwara, T., Takahashi, E., Slaughter, C.A., De Martino, G.N., Hendil, K.B., Chung, C.H., Tanahashi, N. and Tanaka, K. 1998. cDNA cloning and characterization of a human proteasomal modulator subunit, p27 (PSMD9). Genomics 50: 241-250.
6. Qiu, Y., Sharma, A. and Stein, R. 1998. p300 mediates transcriptional stimulation by the basic helix-loop-helix activators of the Insulin gene. Mol. Cell. Biol. 18: 2957-2964.
7. Thomas, M.K., Yao, K.M., Tenser, M.S., Wong, G.G. and Habener, J.F. 1999. BRIDGE-1, a Novel PDZ-domain coactivator of E2A-mediated regulation of Insulin gene transcription. Mol. Cell. Biol. 19: 8492-8504.

CHROMOSOMAL LOCATION

Genetic locus: PSMD9 (human) mapping to 12q24.31; Psmd9 (mouse) mapping to 5 F.

SOURCE

BRIDGE-1 (ZZ07) is a mouse monoclonal antibody raised against recombinant BRIDGE-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

BRIDGE-1 (ZZ07) is recommended for detection of BRIDGE-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BRIDGE-1 siRNA (h): sc-105127, BRIDGE-1 siRNA (m): sc-141747, BRIDGE-1 shRNA Plasmid (h): sc-105127-SH, BRIDGE-1 shRNA Plasmid (m): sc-141747-SH, BRIDGE-1 shRNA (h) Lentiviral Particles: sc-105127-V and BRIDGE-1 shRNA (m) Lentiviral Particles: sc-141747-V.

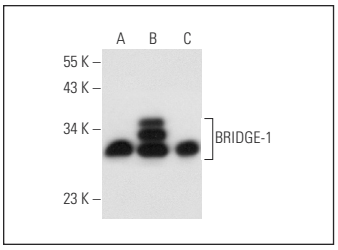
Molecular Weight of BRIDGE-1: 25 kDa.

Positive Controls: BRIDGE-1 (h2): 293T Lysate: sc-176928, Hep G2 cell lysate: sc-2227 or KNRK whole cell lysate: sc-2214.

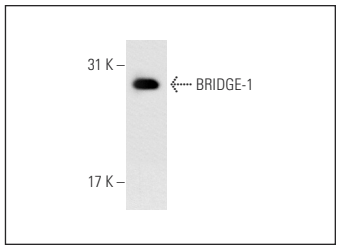
RECOMMENDED SUPPORT REAGENTS

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).

DATA



BRIDGE-1 (ZZ07): sc-100996. Western blot analysis of BRIDGE-1 expression in non-transfected 293T: sc-117752 (**A**), human BRIDGE-1 transfected 293T: sc-176928 (**B**) and Hep G2 (**C**) whole cell lysates.



BRIDGE-1 (ZZ07): sc-100996. Western blot analysis of BRIDGE-1 expression in KNRK whole cell lysate.

SELECT PRODUCT CITATIONS

1. Schütte, L.D., Baumeister, S., Weis, B., Hudemann, C., Hanschmann, E.M. and Lillig, C.H. 2013. Identification of potential protein dithiol-disulfide substrates of mammalian Grx2. Biochim. Biophys. Acta 1830: 4999-5005.

STORAGE

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

PROTOCOLS

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