BRIDGE-1 (h2): 293T Lysate: sc-176928



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 $\beta\text{-cells}$ 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 $\beta\text{-cells}$ 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

- German, M.S. and Wang, J. 1994. The Insulin gene contains multiple transcriptional elements that respond to glucose. Mol. Cell. Biol. 14: 4067-4075.
- 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.
- 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.
- 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.
- 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.
- 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.

PRODUCT

BRIDGE-1 (h2): 293T Lysate represents a lysate of human BRIDGE-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

BRIDGE-1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive BRIDGE-1 antibodies. Recommended use: 10-20 μ l per lane

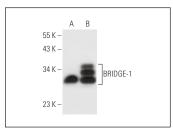
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

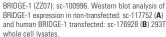
BRIDGE-1 (ZZ07): sc-100996 is recommended as a positive control antibody for Western Blot analysis of enhanced human BRIDGE-1 expression in BRIDGE-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

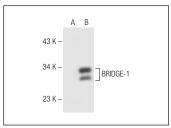
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA







BRIDGE-1 (D-4): sc-376363. Western blot analysis of BRIDGE-1 expression in non-transfected: sc-117752 (A) and human BRIDGE-1 transfected: sc-176928 (B) 293T whole cell lysates.

RESEARCH USE

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