

CRHSP-24 (h2): 293 Lysate: sc-110610

BACKGROUND

CRHSP-24 (calcium-regulated heat-stable protein 24) is a serine phosphoprotein originally identified as a physiological substrate for the Ca^{2+} -calmodulin regulated protein phosphatase, calcineurin (PP2B). An ubiquitously expressed protein, CRHSP-24 interacts with the STYX/dead phosphate protein in developing spermatids and is a paralog of the brain-specific mRNA-binding protein PIPPIN. It is thought to play a common role in calcium-mediated signal transduction resulting from phosphorylation on serine residues. CRHSP-24 is phosphorylated on Ser 52 by PKB α in response to IGF-I, on Ser 52 by PKB α and RSK in response to EGF, and on Ser 41 in the absence of IGF-I/EGF by a Dyrk isoform or another proline-directed protein kinase.

REFERENCES

1. Burnham, D.B. and Williams, J.A. 1982. Effects of carbachol, cholecystokinin, and Insulin on protein phosphorylation in isolated pancreatic acini. *J. Biol. Chem.* 257: 10523-10528.
2. Groblewski, G.E., Yoshida, M., Bragado, M.J., Ernst, S.A., Leykam, J. and Williams, J.A. 1998. Purification and characterization of a novel physiological substrate for calcineurin in mammalian cells. *J. Biol. Chem.* 273: 22738-22744.
3. Williams, J.A. 1999. Intracellular regulatory mechanisms in pancreatic acinar cellular function. *Curr. Opin. Gastroenterol.* 15: 385.
4. Williams, J.A. 2001. Intracellular signaling mechanisms activated by cholecystokinin-regulating synthesis and secretion of digestive enzymes in pancreatic acinar cells. *Annu. Rev. Physiol.* 63: 77-97.
5. Wishart, M.J. and Dixon, J.E. 2002. PTEN and myotubularin phosphatases: from 3-phosphoinositide dephosphorylation to disease. *Trends Cell Biol.* 12: 579-585.
6. Schäfer, C., Steffen, H., Krzykowski, K.J., Göke, B. and Groblewski, G.E. 2003. CRHSP-24 phosphorylation is regulated by multiple signaling pathways in acinar cells. *Am. J. Physiol. Gastrointest. Liver Physiol.* 285: 726-734.
7. Sans, M.D. and Williams, J.A. 2004. Calcineurin is required for translational control of protein synthesis in rat pancreatic acini. *Am. J. Physiol., Cell Physiol.* 287: C310-C319.
8. Tashiro, M., Samuelson, L.C., Liddle, R.A. and Williams, J.A. 2004. Calcineurin mediates pancreatic growth in protease inhibitor-treated mice. *Am. J. Physiol. Gastrointest. Liver Physiol.* 286: G784-G790.
9. Auld, G.C., Campbell, D.G., Morrice, N. and Cohen, P. 2005. Identification of calcium-regulated heat-stable protein of 24 kDa (CRHSP-24) as a physiological substrate for PKB and RSK using KESTREL. *Biochem. J.* 389: 775-783.

CHROMOSOMAL LOCATION

Genetic locus: CARHSP1 (human) mapping to 16p13.2.

PRODUCT

CRHSP-24 (h2): 293 Lysate represents a lysate of human CRHSP-24 transfected 293 cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

APPLICATIONS

CRHSP-24 (h2): 293 Lysate is suitable as a Western Blotting positive control for human reactive CRHSP-24 antibodies. Recommended use: 10-20 μl per lane.

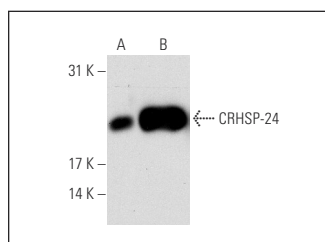
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

CRHSP-24 (A-1): sc-137072 is recommended as a positive control antibody for Western Blot analysis of enhanced human CRHSP-24 expression in CRHSP-24 transfected 293 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



CRHSP-24 (A-1): sc-137072. Western blot analysis of CRHSP-24 expression in non-transfected: sc-110760 (A) and human CRHSP-24 transfected: sc-110610 (B) 293 whole cell lysates.

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.

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.