

CRHSP-24 (A-1): sc-137072

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 Akt-1 (PKB α) in response to IGF-1, on Ser 52 by Akt-1 and RSK in response to EGF and on Ser 41 in the absence of IGF-1/EGF by a DYRK isoform or another proline-directed protein kinase.

REFERENCES

1. Burnham, D.B., et al. 1982. Effects of carbachol, cholecystokinin, and Insulin on protein phosphorylation in isolated pancreatic acini. *J. Biol. Chem.* 257: 10523-10528.
2. Goblewski, G.E., et al. 1998. Purification and characterization of a novel physiological substrate for calcineurin in mammalian cells. *J. Biol. Chem.* 273: 22738-22744.
3. Williams, J.A., et al. 1999. Intracellular regulatory mechanisms in pancreatic acinar cellular function. *Curr. Opin. Gastroenterol.* 15: 385-391.

CHROMOSOMAL LOCATION

Genetic locus: CARHSP1 (human) mapping to 16p13.2; Carhsp1 (mouse) mapping to 16 A1.

SOURCE

CRHSP-24 (A-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 9-53 at the N-terminus of CRHSP-24 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CRHSP-24 (A-1) is available conjugated to agarose (sc-137072 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137072 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137072 PE), fluorescein (sc-137072 FITC), Alexa Fluor[®] 488 (sc-137072 AF488), Alexa Fluor[®] 546 (sc-137072 AF546), Alexa Fluor[®] 594 (sc-137072 AF594) or Alexa Fluor[®] 647 (sc-137072 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-137072 AF680) or Alexa Fluor[®] 790 (sc-137072 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-137072 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

CRHSP-24 (A-1) is recommended for detection of CRHSP-24 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 CRHSP-24 siRNA (h): sc-60443, CRHSP-24 siRNA (m): sc-60444, CRHSP-24 shRNA Plasmid (h): sc-60443-SH, CRHSP-24 shRNA Plasmid (m): sc-60444-SH, CRHSP-24 shRNA (h) Lentiviral Particles: sc-60443-V and CRHSP-24 shRNA (m) Lentiviral Particles: sc-60444-V.

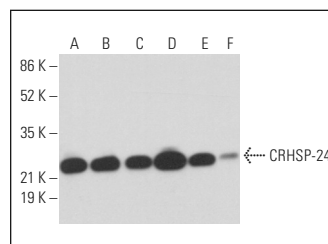
Molecular Weight of CRHSP-24: 24 kDa.

Positive Controls: CRHSP-24 (m): 293T Lysate: sc-119456, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

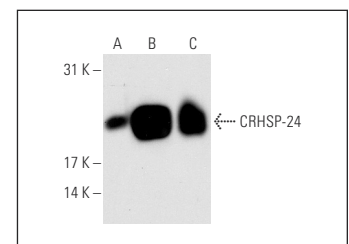
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



CRHSP-24 (A-1): sc-137072. Western blot analysis of CRHSP-24 expression in Hep G2 (A), HeLa (B), HEK293 (C), Jurkat (D), K-562 (E) and NIH/3T3 (F) whole cell lysates. Detection reagent used: m-IgG κ BP-HRP: sc-516102.



CRHSP-24 (A-1): sc-137072. Western blot analysis of CRHSP-24 expression in non-transfected 293T: sc-117752 (A), mouse CRHSP-24 transfected 293T: sc-119456 (B) and Hep G2 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Nishioka, K., et al. 2021. Downregulation of calcium-regulated heat stable protein 1 expression by low-temperature stimulation causes reduction of interferon- β expression and sensitivity to influenza viral infection. *Virus Res.* 309: 198659.

STORAGE

Store at 4 $^{\circ}$ C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.