

Krs-2 (H-8): sc-515051

BACKGROUND

Sterile-20 (Ste20) is a serine/threonine kinase in *Saccharomyces cerevisiae* that is involved in relaying signals from G protein-coupled receptors to cytosolic MAP kinase cascades. Mammalian protein kinases that display sequence similarity to Ste20 are divided into two groups, the PAK subfamily and the GCK subfamily. The PAK subfamily members contain a C-terminal catalytic domain and an N-terminal regulatory domain with a p21^{Rac/Cdc42} binding site, and these kinases can activate both p38 MAPK and JNK. The GCK subfamily members contain a C-terminal regulatory domain and an N-terminal catalytic domain, and they have diverse roles in many pathways, including the activation of ERK, JNK, p38 MAPK, and caspase-3. The mammalian Ste20-like kinases (MST kinases), also known as Krs proteins, are members of the GCK subfamily. Ksr-1 (MST-2) and Ksr-2 (MST-1) are both direct substrates of caspase-3 that accelerate caspase-3 activation. MST-3 is ubiquitously expressed in mammalian tissue and can phosphorylate exogenous substrates as well as itself. MST-4 is highly expressed in placenta, thymus, and peripheral blood leukocytes, and it specifically activates ERK.

REFERENCES

1. Leberer, E., et al. 1992. The protein kinase homologue Ste20p is required to link the yeast pheromone response G-protein $\beta\gamma$ subunits to downstream signalling components. *EMBO J.* 11: 4815-4824.
2. Schinkmann, K., et al. 1997. Cloning and characterization of a human Ste20-like protein kinase with unusual cofactor requirements. *J. Biol. Chem.* 272: 28695-28703.

CHROMOSOMAL LOCATION

Genetic locus: STK4 (human) mapping to 20q13.12; Stk4 (mouse) mapping to 2 H3.

SOURCE

Krs-2 (H-8) is a mouse monoclonal antibody raised against amino acids 291-355 mapping within an internal region of Krs-2 of human origin.

PRODUCT

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

Krs-2 (H-8) is available conjugated to agarose (sc-515051 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515051 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515051 PE), fluorescein (sc-515051 FITC), Alexa Fluor® 488 (sc-515051 AF488), Alexa Fluor® 546 (sc-515051 AF546), Alexa Fluor® 594 (sc-515051 AF594) or Alexa Fluor® 647 (sc-515051 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515051 AF680) or Alexa Fluor® 790 (sc-515051 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

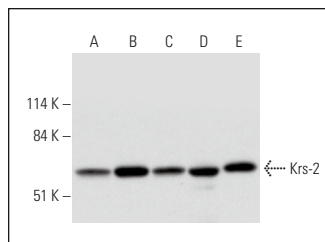
Krs-2 (H-8) is recommended for detection of Krs-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 Krs-2 siRNA (h): sc-39249, Krs-2 siRNA (m): sc-39250, Krs-2 shRNA Plasmid (h): sc-39249-SH, Krs-2 shRNA Plasmid (m): sc-39250-SH, Krs-2 shRNA (h) Lentiviral Particles: sc-39249-V and Krs-2 shRNA (m) Lentiviral Particles: sc-39250-V.

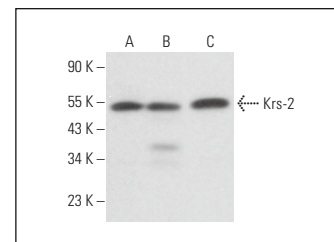
Molecular Weight of Krs-2: 60 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or LNCaP cell lysate: sc-2231.

DATA



Krs-2 (H-8): sc-515051. Western blot analysis of Krs-2 expression in LNCaP (A), Jurkat (B), Hep G2 (C) and PC-12 (D) whole cell lysates and HeLa nuclear extract (E).



Krs-2 (H-8): sc-515051. Western blot analysis of Krs-2 expression in HL-60 (A), Ramos (B) and Daudi (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chen, M., et al. 2018. The MST4-MOB4 complex disrupts the MST1-MOB1 complex in the Hippo-YAP pathway and plays a pro-oncogenic role in pancreatic cancer. *J. Biol. Chem.* 293: 14455-14469.
2. Kim, D.H., et al. 2019. Src-mediated crosstalk between FXR and YAP protects against renal fibrosis. *FASEB J.* 33: 11109-11122.
3. Nadolny, C., et al. 2021. Dysregulation and activities of ubiquitin specific peptidase 2b in the pathogenesis of hepatocellular carcinoma. *Am. J. Cancer Res.* 11: 4746-4767.
4. Yang, L., et al. 2022. Targeting PLA2G16, a lipid metabolism gene, by ginsenoside compound K to suppress the malignant progression of colorectal cancer. *J. Adv. Res.* 36: 265-276.
5. Liu, Y., et al. 2024. Regulation of YAP translocation by myeloid Pten deficiency alleviates acute lung injury via inhibition of oxidative stress and inflammation. *Free Radic. Biol. Med.* 222: 199-210.

RESEARCH USE

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