SANTA CRUZ BIOTECHNOLOGY, INC.

VRK2 (M-41): sc-98732

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

VRK2 (vaccinia related kinase 2) is a 508 amino acid single-pass type IV membrane protein that contains one protein kinase domain and belongs to the serine/threonine protein kinase family. Widely expressed with highest expression in heart, skeletal muscle, pancreas, testis and fetal liver, VRK2 is thought to function as a serine/threonine kinase that catalyzes the ATP-dependent phosphorylation of target proteins, such as casein and p53, thereby regulating their function within the cell. VRK2 is localized to the endoplasmic reticulum (ER) and, via its ability to regulate protein activity, is thought to be involved in normal cell proliferation events. Expression of VRK2 is upregulated in certain carcinomas, suggesting a possible role for VRK2 in carcinogenesis. Five isoforms of VRK2 exist due to alternative splicing events.

REFERENCES

1. Nezu, J., et al. 1997. Identification of two novel human putative serine/threonine kinases, VRK1 and VRK2, with structural similarity to vaccinia virus B1R kinase. Genomics 45: 327-331.
2. Vega, F.M., et al. 2003. Expression of the VRK (vaccinia-related kinase) gene family of p53 regulators in murine hematopoietic development. FEBS Lett. 544: 176-180.

CHROMOSOMAL LOCATION

Genetic locus: VRK2 (human) mapping to 2p16.1; Vrk2 (mouse) mapping to 11 A3.3.

SOURCE

VRK2 (M-41) is a rabbit polyclonal antibody raised against amino acids 1-41 mapping at the C-terminus of VRK2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG 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

VRK2 (M-41) is recommended for detection of VRK2 of mouse, rat and, to a lesser extent, 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)], 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 VRK2 siRNA (h): sc-94622, VRK2 siRNA (m): sc-155228, VRK2 shRNA Plasmid (h): sc-94622-SH, VRK2 shRNA Plasmid (m): sc-155228-SH, VRK2 shRNA (h) Lentiviral Particles: sc-94622-V and VRK2 shRNA (m) Lentiviral Particles: sc-155228-V.

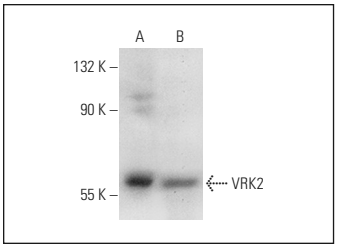
Molecular Weight of VRK2: 58 kDa.

Positive Controls: mouse liver extract: sc-2256.

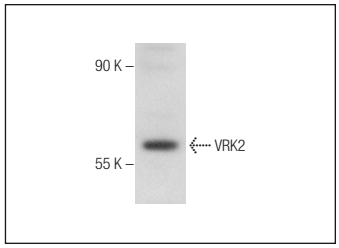
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



VRK2 (M-41): sc-98732. Western blot analysis of VRK2 expression in HL-60 whole cell lysate (**A**) and mouse liver tissue extract (**B**).



VRK2 (M-41): sc-98732. Western blot analysis of VRK2 expression in A2058 whole cell lysate.

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 or our catalog for detailed protocols and support products.