

SPAK (H-215): sc-68911

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. SPAK, also known as STK39 (serine threonine kinase 39), DCHT or PASK, is a 547 amino acid protein that localizes to both the cytoplasm and the nucleus and contains one protein kinase domain. Expressed predominately in pancreas, brain, heart, lung, liver and testis, SPAK functions as a Ser/Thr protein kinase that catalyzes the ATP-dependent phosphorylation of target proteins and is thought to be involved in mediating stress-activated signals. The gene encoding SPAK maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: STK39 (human) mapping to 2q24.3; Stk39 (mouse) mapping to 2 C1.3.

SOURCE

SPAK (H-215) is a rabbit polyclonal antibody raised against amino acids 333-547 mapping at the C-terminus of SPAK of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SPAK (H-215) is recommended for detection of SPAK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); may cross-react to a lesser extent with OXSR1.

SPAK (H-215) is also recommended for detection of SPAK in additional species, including equine, canine and porcine.

Suitable for use as control antibody for SPAK siRNA (h): sc-76547, SPAK siRNA (m): sc-76548, SPAK shRNA Plasmid (h): sc-76547-SH, SPAK shRNA Plasmid (m): sc-76548-SH, SPAK shRNA (h) Lentiviral Particles: sc-76547-V and SPAK shRNA (m) Lentiviral Particles: sc-76548-V.

Molecular Weight of SPAK: 60 kDa.

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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. 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 or our catalog for detailed protocols and support products.