SANTA CRUZ BIOTECHNOLOGY, INC.

PRAK (N-19): sc-8251

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PRAK (p38-regulated/activated kinase), also referred to as mitogen-activated protein kinase (MAPK)-activated protein kinase (MAPKAPK)-5, is a ubiquitously expressed serine/threonine kinase regulated by p38α and p38β MAP kinases. Activated JNK, p38γ or p38δ are unable to induce phosphorylation of PRAK *in vitro*. Phosphorylation of PRAK occurs *in vivo* in response to p38 activation by stress-related extracellular stimuli including UV light, oxidation and proinflammatory cytokines. Two other substrates for p38, MAPKAPK-2 and MAPKAPK-3/3pK, share approximately 45% sequence homology with PRAK including the phosphorylation motif recognized by p38, Lys-X-Thr-Pro. Activated PRAK has been shown to specifically phosphorylate HSP 27 *in vitro*, suggesting that the protein may play a role in stress-induced small heat shock protein phosphorylation *in vivo*.

CHROMOSOMAL LOCATION

Genetic locus: MAPKAPK5 (human) mapping to 12q24.12; Mapkapk5 (mouse) mapping to 5 F.

SOURCE

PRAK (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PRAK of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-8251 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PRAK (N-19) is recommended for detection of PRAK of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PRAK (N-19) is also recommended for detection of PRAK in additional species, including equine, canine and porcine.

Suitable for use as control antibody for PRAK siRNA (h): sc-36310, PRAK siRNA (m): sc-36311, PRAK shRNA Plasmid (h): sc-36310-SH, PRAK shRNA Plasmid (m): sc-36311-SH, PRAK shRNA (h) Lentiviral Particles: sc-36310-V and PRAK shRNA (m) Lentiviral Particles: sc-36311-V.

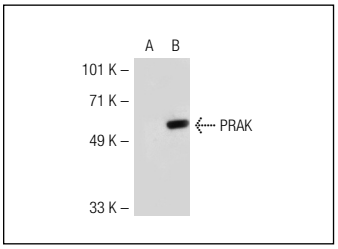
Molecular Weight of PRAK: 54 kDa.

Positive Controls: PRAK (h): 293T Lysate: sc-116012, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

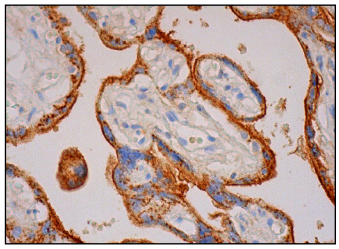
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



PRAK (N-19): sc-8251. Western blot analysis of PRAK expression in non-transfected: sc-117752 (**A**) and human PRAK transfected: sc-116012 (**B**) 293T whole cell lysates.



PRAK (N-19): sc-8251. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of trophoblastic cells.

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.