

HPK1 (C-20): sc-6230

BACKGROUND

Several mammalian kinases have been identified with sequence similarity to the *Saccharomyces cerevisiae* serine/threonine kinase STE20. STE20 is involved in relaying signals from G protein-coupled receptors to cytosolic MAP kinase cascades, and it lies upstream of a MAP kinase kinase kinase. Mammalian STE20-like kinases include HPK1, KHS, GLK, NIK, YSK1, Krs-1, Krs-2 and GC kinase. HPK1 (hematopoietic progenitor kinase 1), like many other STE20-like kinases, specifically activates the JNK signaling pathway. HPK1 binds to and phosphorylates MEKK, suggesting it plays an important role in regulating the stress responsive JNK/SAPK signaling pathway.

CHROMOSOMAL LOCATION

Genetic locus: MAP4K1 (human) mapping to 19q13.2; Map4k1 (mouse) mapping to 7 B1.

SOURCE

HPK1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HPK1 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.

Blocking peptide available for competition studies, sc-6230 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.

RESEARCH USE

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

APPLICATIONS

HPK1 (C-20) is recommended for detection of HPK1 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).

HPK1 (C-20) is also recommended for detection of HPK1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HPK1 siRNA (h): sc-35591, HPK1 siRNA (m): sc-35592, HPK1 shRNA Plasmid (h): sc-35591-SH, HPK1 shRNA Plasmid (m): sc-35592-SH, HPK1 shRNA (h) Lentiviral Particles: sc-35591-V and HPK1 shRNA (m) Lentiviral Particles: sc-35592-V.

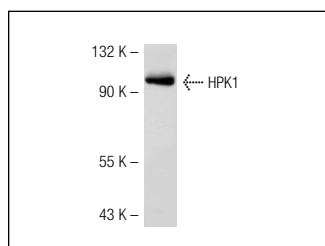
Molecular Weight of HPK1: 97 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or BJAB whole cell lysate: sc-2207.

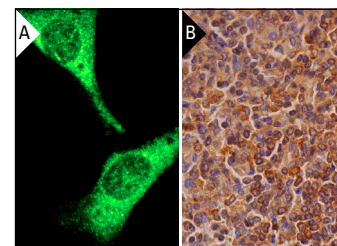
RECOMMENDED SECONDARY REAGENTS

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



HPK1 (C-20): sc-6230. Western blot analysis of HPK1 expression in BJAB whole cell lysate.



HPK1 (C-20): sc-6230. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp (B).

SELECT PRODUCT CITATIONS

- Yankee, T.M., et al. 2003. Expression of the Grb2-related protein of the lymphoid system in B cell subsets enhances B cell antigen receptor signaling through mitogen-activated protein kinase pathways. *J. Immunol.* 170: 349-355.
- Di Bartolo, V., et al. 2007. A novel pathway down-modulating T cell activation involves HPK-1-dependent recruitment of 14-3-3 proteins on SLP-76. *J. Exp. Med.* 204: 681-691.
- Leu, J.G., et al. 2012. The effects of gold nanoparticles in wound healing with antioxidant epigallocatechin gallate and α -lipoic acid. *Nanomedicine* 8: 767-775.
- Chen-Deutsch, X. and Studzinski, G.P. 2012. Dual role of hematopoietic progenitor kinase 1 (HPK1) as a positive regulator of 1 α ,25-dihydroxyvitamin D-induced differentiation and cell cycle arrest of AML cells and as a mediator of vitamin D resistance. *Cell Cycle* 11: 1364-1373.

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Try **HPK1 (G-9): sc-374183** or **HPK1 (C-9): sc-376169**, our highly recommended monoclonal alternatives to HPK1 (C-20).