SANTA CRUZ BIOTECHNOLOGY, INC.

# HGK (M-190): sc-25738

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

HGK (HPK/GC kinase-like kinase), also known as mitogen-activated protein kinase kinase kinase kinase 4, MAPK/ERK kinase kinase kinase 4, MEKKK 4 or NCK-interacting kinase (NIK), is a member of the serine/threonine kinase subfamily, Ste20. This subfamily is comprised of several mammalian kinases which exhibit sequence similarity to the Saccharomyces cerevisiae serine/threonine kinase, Ste20. Members of this subfamily include KHS, GLK, YSK1, HPK1, Krs-1, Krs-2, GC kinase and HGK. HGK, like many of the Ste20-like kinases, has been shown to activate the SAPK/JNK stress response pathway. HGK interacts with MEK kinase-1 and is thought to act upstream of MEK kinase-1 in the SAPK/JNK signaling pathway. Both the kinase domain and the C-terminal regulatory domain of HGK are required for full activation.

## REFERENCES


1. Leberer, E., et al. 1992. The protein kinase homologue Ste20p is required to link the yeast pheromone response G-protein βγ subunits to downstream signalling components. EMBO J. 11: 4815-4824.
2. Wu, C., et al. 1995. Molecular characterization of Ste20p, a potential mitogen-activated protein or extracellular signal-regulated kinase kinase (MEK) kinase kinase from *Saccharomyces cerevisiae*. J. Biol. Chem. 270: 15984-15992.


## CHROMOSOMAL LOCATION

Genetic locus: MAP4K4 (human) mapping to 2q11.2; Map4k4 (mouse) mapping to 1 B.

## SOURCE

HGK (M-190) is a rabbit polyclonal antibody raised against amino acids 511-700 of HGK 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.

## APPLICATIONS

HGK (M-190) is recommended for detection of HGK 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).

Suitable for use as control antibody for HGK siRNA (h): sc-39243, HGK siRNA (m): sc-39244, HGK shRNA Plasmid (h): sc-39243-SH, HGK shRNA Plasmid (m): sc-39244-SH, HGK shRNA (h) Lentiviral Particles: sc-39243-V and HGK shRNA (m) Lentiviral Particles: sc-39244-V.

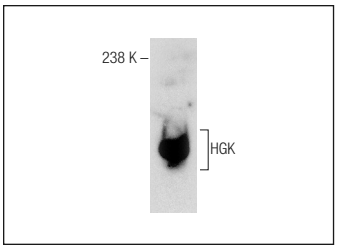
Molecular Weight of HGK: 130 kDa.

Positive Controls: MDA-MB-468 whole cell lysate: sc-2282 or rat brain extract: sc-2392.

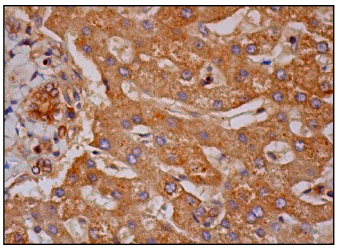
## RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA




HGK (M-190): sc-25738. Western blot analysis of HGK expression in rat brain tissue extract.



HGK (M-190): sc-25738. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

## 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.