SANTA CRUZ BIOTECHNOLOGY, INC.

# IP6K1 (H-130): sc-292439

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

The members of the inositol hexakisphosphate kinase family, IP6K1 and IP6K2, have a high affinity and selectivity for inositol hexakisphosphate (InsP6) as a substrate. IP6K1 and IP6K2 (also designated PiUS) convert InsP6 to PP-InsP5. However, neither kinase demonstrates any catalytic activity with other inositol pyrophosphates. The presence of InsP6, which inhibits serine/threonine protein phosphatases, increases the influx of calcium across the plasma membrane and implies that it may mediate the regulation of Insulin exocytosis. IP6K1 was purified in rat brain extracts. By homology, IP6K1 and IP6K2 were characterized in mouse. IP6K1 displays ATP synthase activity by transferring a phosphate from PP-InsP5 to ADP, which suggests a role for the IP6 kinases as high energy phosphate donors.

## REFERENCES


1. Voglmaier, S.M., et al. 1996. Purified inositol hexakisphosphate kinase is an ATP synthase: diphosphoinositol pentakisphosphate as a high-energy phosphate donor. Proc. Natl. Acad. Sci. USA 93: 4305-4310.
2. Huang, C.F., et al. 1998. Identification and purification of disphosphoinositol pentakisphosphate kinase, which synthesizes the inositol pyrophosphate bis(diphospho) inositol tetrakisphosphate. Biochemistry 37: 14998-15004.


## CHROMOSOMAL LOCATION

Genetic locus: IP6K1 (human) mapping to 3p21.31; Ip6k1 (mouse) mapping to 9 F2.

## SOURCE

IP6K1 (H-130) is a rabbit polyclonal antibody raised against amino acids 77-206 mapping near the N-terminus of IP6K1 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.

## APPLICATIONS

IP6K1 (H-130) is recommended for detection of IP6K1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IP6K1 (H-130) is also recommended for detection of IP6K1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for IP6K1 siRNA (h): sc-39069, IP6K1 siRNA (m): sc-39070, IP6K1 shRNA Plasmid (h): sc-39069-SH, IP6K1 shRNA Plasmid (m): sc-39070-SH, IP6K1 shRNA (h) Lentiviral Particles: sc-39069-V and IP6K1 shRNA (m) Lentiviral Particles: sc-39070-V.

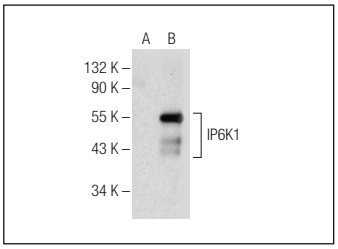
Molecular Weight of IP6K1: 54 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, rat cerebellum extract: sc-2398 or IP6K1 (h): 293 Lysate: sc-111154.

## 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




IP6K1 (H-130): sc-292439. Western blot analysis of IP6K1 expression in non-transfected: sc-110760 (**A**) and human IP6K1 transfected: sc-111154 (**B**) 293 whole cell lysates.

## 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.