

ITPK1 (N-13): sc-164713

BACKGROUND

Intracellular calcium concentrations are regulated by a family of inositol phosphates, which act as second messengers in the calcium cell signaling pathway. ITPK1 (inositol 1,3,4-triphosphate 5/6 kinase), also known as ITRPK1, is a 414 amino acid monomer that belongs to the ITPK1 family and exists as two alternatively spliced isoforms. Widely expressed, ITPK1 is found at highest levels in brain, followed by heart, skeletal muscle, kidney, pancreas, liver, placenta and lung. ITPK1 contains one ATP-grasp domain and has been found to phosphorylate various inositol polyphosphates and modify TNF- α -induced apoptosis. The gene encoding ITPK1 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome.

REFERENCES

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- Chamberlain, P.P., et al. 2007. Integration of inositol phosphate signaling pathways via human ITPK1. *J. Biol. Chem.* 282: 28117-28125.
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CHROMOSOMAL LOCATION

Genetic locus: ITPK1 (human) mapping to 14q32.12; Itpk1 (mouse) mapping to 12 E.

SOURCE

ITPK1 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ITPK1 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.

Blocking peptide available for competition studies, sc-164713 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

ITPK1 (N-13) is recommended for detection of ITPK1 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).

Suitable for use as control antibody for ITPK1 siRNA (h): sc-92365, ITPK1 siRNA (m): sc-146313, ITPK1 shRNA Plasmid (h): sc-92365-SH, ITPK1 shRNA Plasmid (m): sc-146313-SH, ITPK1 shRNA (h) Lentiviral Particles: sc-92365-V and ITPK1 shRNA (m) Lentiviral Particles: sc-146313-V.

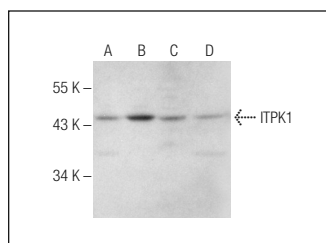
Molecular Weight of ITPK1 isoforms: 46/36 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, MOLT-4 cell lysate: sc-2233 or HeLa whole cell lysate: sc-2200.

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.

DATA



ITPK1 (N-13): sc-164713. Western blot analysis of ITPK1 expression in A-431 (A), MOLT-4 (B), Raji (C) and HeLa (D) 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.