BACKGROUND

The PIP5K family is divided into type I, type II and type III proteins, each of which phosphorylates distinct substrates. The PIP5K proteins contain an activation loop which determines their enzymatic specificity and subcellular targeting. Phosphatidylinositol-4-phosphate-5-kinase, also known as PIP5KIII or PIP5K3, synthesizes phosphatidylinositol-4,5-bisphosphate, which regulates various processes including cell proliferation, survival, membrane trafficking and cytoskeletal organization. Located in the membrane of the endosome, PIP5KII contains an FYVE-type zinc finger and catalyzes the rate-limiting step in the production of phosphatidylinositol, a phospholipid that plays a role in Actin dynamics. Defects in the gene encoding PIP5KII lead to corneal fleck dystrophy (CFD), an autosomal disorder in which small white flecks are found throughout the corneal stroma.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: PIP5K3 (human) mapping to 2q33.3; Pip5k3 (mouse) mapping to 1 C2.

SOURCE

PIP5KIII (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PIP5KIII 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-83846 P, (100 µg 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

PIP5KIII (E-20) is recommended for detection of PIP5KIII of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 PIP5K III siRNA (h): sc-39142, PIP5K III siRNA (m): sc-72205, PIP5K III shRNA Plasmid (h): sc-39142-SH, PIP5KIII shRNA Plasmid (m): sc-72205-SH, PIP5K III shRNA (h) Lentiviral Particles: sc-39142-V and PIP5KIII shRNA (m) Lentiviral Particles: sc-72205-V.

Molecular Weight of PIP5KIII: 262 kDa.

Positive Controls: 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-2233 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2783 (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.

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.