

PAS Kinase (γ S-15): sc-27972

BACKGROUND

A small number of intracellular protein kinases control the ability of cells to respond to nutritional cues. One of these proteins, PAS kinase, regulates sugar metabolism and translation in budding yeast. PAS kinase phosphorylates three translation factors as well as UDP-glucose pyrophosphorylase and glycogen synthase, enzymes active in the final two steps of glycogen biosynthesis. The resulting inhibition of these targets causes downregulation of carbohydrate storage in the cell, and connects the balance of fuel consumption/storage to protein synthesis. The PAS kinase gene contains 18 exons and maps to chromosome 2q37.3 and encodes a protein 1,323 amino acids in length.

REFERENCES

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2. Hofer, T., et al. 2001. Mammalian PASKIN, a PAS-serine/threonine kinase related to bacterial oxygen sensors. Biochem. Biophys. Res. Commun. 288: 757-764.
3. Rutter, J., et al. 2001. PAS kinase: an evolutionarily conserved PAS domain-regulated serine/threonine kinase. Proc. Natl. Acad. Sci. U.S.A 98: 8991-8996.
4. Wilson WA, et al. 2002. Nutrient-regulated protein kinases in budding yeast. Cell 111: 155-158.
5. Rutter, J., et al. 2002. Coordinate regulation of sugar flux and translation by PAS kinase. Cell 111: 17-28.
6. Lindsley, J.E., et al. 2004. Nutrient sensing and metabolic decisions. Comp. Biochem. Physiol. B. Biochem. Mol. Biol. 139: 543-559.
7. Cameroni, E., et al. 2004. The novel yeast PAS kinase Rim 15 orchestrates G0-associated antioxidant defense mechanisms. Cell Cycle 3: 462-468.

SOURCE

PAS Kinase (γ S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PAS Kinase of *Saccharomyces cerevisiae* origin.

RESEARCH USE

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

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.

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-27972 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PAS Kinase (γ S-15) is recommended for detection of PAS Kinase of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of PAS Kinase: 144 kDa.

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.