



Rtg2 (yK-15): sc-26930

BACKGROUND

In *Saccharomyces cerevisiae*, cells modulate the expression of nuclear genes in response to changes in the functional state of mitochondria, and interorganelle communication pathway called retrograde regulation. Expression of the Cit2 gene shows a typical retrograde response in that its expression dramatically increases in cells with dysfunctional mitochondria, such as in rho(o) petites. Three genes, Rtg1, Rtg2 and Rtg3, are required for both basal and elevated expression of Cit2. Rtg2 acts to transduce mitochondrial signals affecting the phosphorylation state and subcellular localization of Rtg3. In addition to their role in retrograde regulation of Cit2, the Rtg genes mediate the expression of genes encoding peroxisomal proteins and are thus pivotal genes in controlling interorganelle communication between mitochondria, peroxisomes, and the nucleus. Yeast strains with null alleles of either of these two genes (Rtg1 or Rtg2) cannot grow on acetate as the sole carbon source and are auxotrophic for glutamate and aspartate. Rtg2 (for retrograde regulation protein 2), a protein of 394 amino acids, contains an N-terminal hsp70/actin/sugar kinase ATP binding domain. Rtg2 acts as a modifier gene for CTG*CAG repeat instability in *Saccharomyces cerevisiae*. The yeast Rtg2 gene also regulates aconitase expression under catabolite repression conditions, indicating that Rtg2 may be involved in the control of several anaplerotic pathways.

REFERENCES

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SOURCE

Rtg2 (yK-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Rtg2 of *Saccharomyces cerevisiae* 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-26930 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rtg2 (yK-15) is recommended for detection of Rtg2 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).

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.

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.