SANTA CRUZ BIOTECHNOLOGY, INC.

Ras2 (yC-19): sc-6759

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The guanine nucleotide exchange factor Cdc25 (also designated Ctn1) regulates adenylyl cyclase via the small G proteins Ras1 and Ras2 (also known as Glc5 or Ctn5). The yeast Ras proteins regulate cell growth and development by cycling between an active GTP-bound state and an inactive GDP-bound state. Adenylyl cyclase, encoded by the Cdc35 gene (also designated Cyr1, Hrs1 or Sra4), catalyzes the formation of the second messenger cAMP. cAMP exerts its effects via a cAMP-dependent kinase consisting of two regulatory subunits, encoded by Bcy1 (also designated Reg1 or Sra1), and two catalytic subunits, encoded by Tpk1 (also designated Pka1 or Sra3).

REFERENCES

1. Broek, D., et al. 1985. Differential activation of yeast adenylate cyclase by wild-type and mutant Ras proteins. Cell 41: 763-769.
2. Kataoka, T., et al. 1985. DNA sequence and characterization of the *S. cerevisiae* gene encoding adenylate cyclase. Cell 43: 493-505.
3. Toda, T., et al. 1987. Cloning and characterization of Bcy1, a locus encoding a regulatory subunit of the cyclic AMP-dependent protein kinase in *Saccharomyces cerevisiae*. Mol. Cell. Biol. 7: 1371-1377.
4. Broek, D., et al. 1987. The *S. cerevisiae* CDC25 gene product regulates the Ras/adenylate cyclase pathway. Cell 48: 789-799.
5. Toda, T., et al. 1987. Three different genes in *S. cerevisiae* encode the catalytic subunits of the cAMP-dependent protein kinase. Cell 50: 277-287.
6. Oehlen, L.J.W.M., et al. 1993. Inactivation of the CDC25 gene product in *Saccharomyces cerevisiae* leads to a decrease in glycolytic activity which is independent of cAMP levels. J. Gen. Microbiol. 139: 2091-2100.
7. Mintzer, K.A. and Field, J. 1994. Interactions between adenylyl cyclase, CAP and RAS from *Saccharomyces cerevisiae*. Cell. Signal. 6: 681-694.

SOURCE

Ras2 (yC-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Ras2 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-6759 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ras2 (yC-19) is recommended for detection of Ras2 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

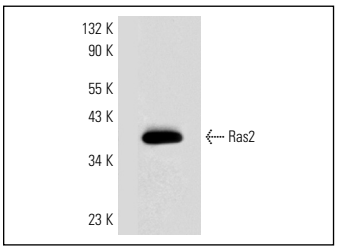
Molecular Weight of Ras2: 35 kDa.

Positive Controls: *Saccaromyces cerevisiae* whole cell lysate.

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.

DATA



Ras2 (yC-19): sc-6759. Western blot analysis of Ras2 expression in *S. cerevisiae* whole cell lysate.

SELECT PRODUCT CITATIONS

1. Colombo, S., et al. 2004. Activation state of the Ras2 protein and glucose-induced signaling in *Saccharomyces cerevisiae*. J. Biol. Chem. 279: 46715-46722.
2. Harashima, T., et al. 2006. The kelch proteins Gpb1 and Gpb2 inhibit Ras activity via association with the yeast RasGAP neurofibromin homologs Ira1 and Ira2. Mol. Cell 22: 819-830.
3. Yahyaoui, W., et al. 2007. Deletion of the cruciform binding domain in CBP/14-3-3 displays reduced origin binding and initiation of DNA replication in budding yeast. BMC Mol. Biol. 8: 27.
4. Xiaojia, B. and Jian, D. 2010. Serine214 of Ras2p plays a role in the feedback regulation of the Ras-cAMP pathway in the yeast *Saccharomyces cerevisiae*. FEBS Lett. 584: 2333-2338.
5. Geymonat, M., et al. 2010. Phosphorylation of Lte1 by Cdk prevents polarized growth during mitotic arrest in *S. cerevisiae*. J. Cell Biol. 191: 1097-1112.

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.

MONOS Satisfaction Guaranteed

Try **Ras2 (A-11): sc-365773**, our highly recommended monoclonal alternative to Ras2 (yC-19).