



## Bcy1 (yC-20): sc-6765

### BACKGROUND

The guanine nucleotide exchange factor Cdc25 (also designated Ctn1) regulates adenyl cyclase via the small G proteins Ras1 and Ras2 (also known as G1c5 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. Adenyl 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/adenylyl 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., 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., et al. 1994. Interactions between adenyl cyclase, CAP and RAS from *Saccharomyces cerevisiae*. *Cell. Signal.* 6: 681-694.

### SOURCE

Bcy1 (yC-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Bcy1 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-6765 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Bcy1 (yC-20) is recommended for detection of Bcy1 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

### STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### 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.

### SELECT PRODUCT CITATIONS

1. Soulard, A., et al. 2010. The rapamycin-sensitive phosphoproteome reveals that TOR controls protein kinase A toward some but not all substrates. *Mol. Biol. Cell* 21: 3475-3486.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.