SANTA CRUZ BIOTECHNOLOGY, INC.

Ade2 (yC-17): sc-19947

The Power to Question

BACKGROUND

The ADE2 gene of *Saccharomyces cerevisiae* yeast encodes aminoimidazole ribonucleotide-carboxylase (AIR-carboxylase or AIRC), an enzyme catalyzing the sixth stage of purine nucleotide biosynthesis. Originally, the ADE2 gene was cloned in a shuttle vector by complementing the Ade2 mutation in the yeast. Mutational changes in Ade2 result in the accumulation of red pigment in cells, which serves as an indicator for the selection of mutants. This easily detectable phenotype of red-coloured colonies can account for the wide use of Ade2 mutants in yeast genetics. Human p53 expressed in *Saccharomyces cerevisiae* activates transcription of the ADE2 gene. Consequently, yeast colonies containing wild-type p53 are white and colonies containing mutant p53 are red.

REFERENCES

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2. Sasnauskas, K.V., Giadvilaite, A.A. and Ianulaitis, A.A. 1987. Cloning of the ADE2 gene of *Saccharomyces cerevisiae* and localization of the ARS-sequence. Genetika 23: 1141-1148.
3. Gedvilaite, A. and Sasnauskas, K. 1994. Control of the expression of the ADE2 gene of the yeast *Saccharomyces cerevisiae*. Curr. Genet. 25: 475-479.
4. Flaman, J.M., Frebourg, T., Moreau, V., Charbonnier, F., Martin, C., Chappuis, P., Sappino, A.P., Limacher, I.M., Bron, L., Benhattar, J., et al. 1995. A simple p53 functional assay for screening cell lines, blood, and tumors. Proc. Natl. Acad. Sci. USA 92: 3963-3967.
5. Zekhnov, A.M., Andreichuk, I.V. and Domkin, V.D. 1998. New phenotypic manifestation of the ade2 mutation in *Saccharomyces cerevisiae* yeast—the inability to grow on a synthetic medium with glycerol and hypoxathine. Genetika 34: 190-197.

SOURCE

Ade2 (yC-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Ade2 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-19947 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Ade2 (yC-17) is recommended for detection of Ade2 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.