SANTA CRUZ BIOTECHNOLOGY, INC.

Pdr5 (yN-18): sc-27253

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The yeast PDR5 gene encodes an efflux pump that confers multidrug resistance. Pdr5 is a 160 kDa plasma membrane ATP-binding cassette transporter that actively exports drugs, thereby lowering their intracellular levels. Expression of PDR5 is positively regulated by the transcription factors Pdr1 and Pdr3, which recognize the same pleiotropic drug resistance elements (PDREs) in the PDR5 promoter. Mutations at the yeast PDR1 transcriptional regulator locus are responsible for overexpression of the ABC transporter gene PDR5.

REFERENCES

1. Balzi, E., et al. 1994. PDR5, a novel yeast multidrug resistance conferring transporter controlled by the transcription regulator PDR1. J. Biol. Chem. 269: 2206-2214.
2. Carvajal, E., et al. 1997. Molecular and phenotypic characterization of yeast PDR1 mutants that show hyperactive transcription of various ABC multidrug transporter genes. Mol. Gen. Genet. 256: 406-415.
3. Fleckenstein, A., et al. 1999. A PDR5-independent pathway of multi-drug resistance regulated by the SIN4 gene product. Yeast. 15: 133-137.
4. Emter, R., et al. 2002. ERG6 and PDR5 regulate small lipophilic drug accumulation in yeast cells via distinct mechanisms. FEBS Letts. 521: 57-61.
5. Hellauer, K., et al. 2002. Zinc cluster protein Rdr1p is a transcriptional repressor of the PDR5 gene encoding a multidrug transporter. J. Biol. Chem. 277: 17671-17676.
6. Teixeira, M.C., et al. 2002. *Saccharomyces cerevisiae* resistance to chlorinated phenoxyacetic acid herbicides involves Pdr1p-mediated transcriptional activation of TPO1 and PDR5 genes. Biochem. Biophys. Res. Commun. 292: 530-537.
7. Gao, C., et al. 2004. On the mechanism of constitutive Pdr1 activator-mediated PDR5 transcription in *Saccharomyces cerevisiae*: evidence for enhanced recruitment of coactivators and altered nucleosome structures. J. Biol. Chem. 279: 42677-42686.
8. Mamnun, Y.M., et al. 2004. Expression regulation of the yeast PDR5 ATP-binding cassette (ABC) transporter suggests a role in cellular detoxification during the exponential growth phase. FEBS Letts. 559: 111-117.

SOURCE

Pdr5 (yN-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Pdr5 of *Saccharomyces cerevisiae* origin.

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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27253 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Pdr5 (yN-18) is recommended for detection of Pdr5 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 Pdr5: 160 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.

RESEARCH USE

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