

Ydj1 (yN-18): sc-23749

BACKGROUND

The *Saccharomyces cerevisiae* YDJ1 gene encodes a yeast homolog of DnaJ, an *Escherichia coli* molecular chaperone and regulator of Hsp70 function. Ydj1, an Hsp40 protein, is involved in a variety of cellular activities that control polypeptide fate, such as folding and translocation across intracellular membranes. In addition, Ydj1 is also required for ubiquitin-dependent degradation of certain abnormal proteins. The Hsp70/Hsp40 chaperone system plays an essential role in cell physiology. Ydj1 is a J-domain containing protein that interacts with Ssa1 and facilitates ER-associated degradation (ERAD). Ydj1 also functions to present steroid receptors to the Hsp90 pathway for folding and hormonal control. Ydj1p promotes AXL1 mRNA accumulation and in addition appears to facilitate the proper folding of nascent Axl1p.

REFERENCES

1. Tsai, J., et al. 1996. A conserved HPD sequence of the J-domain is necessary for Ydj1 stimulation of HSP70 ATPase activity at a site distinct from substrate binding. *J. Biol. Chem.* 271: 9347-9354.
2. Lee, D.H., et al. 1996. Involvement of the molecular chaperone Ydj1 in the ubiquitin-dependent degradation of short-lived and abnormal proteins in *Saccharomyces cerevisiae*. *Mol. Cell. Biol.* 16: 4773-4781.
3. Brodsky, J.L., et al. 1998. Mutations in the cytosolic DnaJ homologue, Ydj1, delay and compromise the efficient translation of heterologous proteins in yeast. *Biochemistry* 37: 18045-18055.
4. Meacham, G.C., et al. 1999. Mutations in the yeast HSP40 chaperone protein Ydj1 cause defects in Axl1 biogenesis and pro-a-factor processing. *J. Biol. Chem.* 274: 34396-34402.
5. Johnson, J.L., et al. 2000. A role for the HSP40 Ydj1 in repression of basal steroid receptor activity in yeast. *Mol. Cell. Biol.* 20: 3027-3036.
6. Kabani, M., et al. 2002. Nucleotide exchange factor for the yeast HSP70 molecular chaperone Ssa1p. *Mol. Cell. Biol.* 22: 4677-4689.
7. Goeckeler, J.L., et al. 2002. Overexpression of yeast HSP110 homolog Sse1p suppresses Ydj1-151 thermosensitivity and restores HSP90-dependent activity. *Mol. Biol. Cell* 13: 2760-2770.

SOURCE

Ydj1 (yN-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ydj1 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-23749 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.

APPLICATIONS

Ydj1 (yN-18) is recommended for detection of Ydj1 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.

SELECT PRODUCT CITATIONS

1. Bagriantsev, S.N., et al. 2008. Variant-specific [PSI⁺] infection is transmitted by Sup35 polymers within [PSI⁺] aggregates with heterogeneous protein composition. *Mol. Biol. Cell* 19: 2433-2443.
2. Polier, S., et al. 2008. Structural basis for the cooperation of Hsp70 and Hsp110 chaperones in protein folding. *Cell* 133: 1068-1079.
3. Phan, V.T., et al. 2010. The RasGAP proteins Ira2 and neurofibromin are negatively regulated by Gpb1 in yeast and ETEA in humans. *Mol. Cell. Biol.* 30: 2264-2279.

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.