SANTA CRUZ BIOTECHNOLOGY, INC.

# Ydj1 (yV-16): sc-23750

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*The Power to Question*

## BACKGROUND

The *Saccharomyces cerevisiae* YDJ1 gene encodes a yeast homologue of DnaJ, an *Escherichia coli* molecular chaperone and regulator of HSP70 function. Ydj1, a 46 kDa 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 degredation (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. and Douglas, M.G. 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., Sherman, M.Y. and Goldberg, A.L. 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., Lawrence, J.G. and Caplan, A.J. 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., Browne, B.L., Zhang, W., Kellermayer, R., Bedwell, D.M. and Cyr, D.M. 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. and Craig, E.A. 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., Beckerich, J.M. and Brodsky, J.L. 2002. Nucleotide exchange factor for the yeast HSP70 molecular chaperone Ssa1p. Mol. Cell. Biol. 22: 4677-4689.
7. Goeckeler, J.L., Stephens, A., Lee, P., Caplan, A.J. and Brodsky, J.L. 2002. Overexpression of yeast HSP110 homolog Sse1p suppresses Ydj1-151 thermosensitivity and restores HSP90-dependent activity. Mol. Biol. Cell 13: 2760-2770.


## SOURCE

Ydj1 (yV-16) 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-23750 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Ydj1 (yV-16) 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.

## 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.

## PROTOCOLS

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