



Dsk2 (yS-19): sc-26459

BACKGROUND

Ubiquitin (Ub) regulates important cellular processes through covalent attachment to its substrates. The fate of a substrate depends on the number of conjugated ubiquitin moieties, as well as the lysine linkage of Ub-Ub conjugation. The major function of Ub is to regulate the *in vivo* half-life of its substrates. Once a multi-Ub chain is attached to a substrate, it must be shielded from deubiquitylating enzymes for the 26S proteasome to recognize it. Dsk2 is a polyubiquitin-binding protein that can interact with the proteasome. Dsk2 from *Saccharomyces cerevisiae* belongs to the class of proteins that contain a ubiquitin-like (UbL) domain at the N terminus together with a ubiquitin-associated (UbA) domain at the C terminus. Dsk2 and Rad23 form a complex and cooperate to recognize a subset of multi-Ub chains and deliver the Ub-tagged substrates to the proteasome. These two proteins are capable of binding both polyubiquitin chains and the 26S proteasome and are implicated in the recognition and turnover of substrates by this proteolytic complex.

REFERENCES

1. Wilkinson, C.R., Seeger, M., Hartmann-Petersen, R., Stone, M., Wallace, M., Semple, C., and Gordon, C. 2001. Proteins containing the UbA domain are able to bind to multi-ubiquitin chains. *Nat. Cell. Biol.* 3: 939-943.
2. Funakoshi, M., Sasaki, T., Nishimoto, T., and Kobayashi, H. 2002. Budding yeast Dsk2p is a polyubiquitin-binding protein that can interact with the proteasome. *Proc. Natl. Acad. Sci. USA* 99: 745-750.
3. Rao, H. and Sastry, A. 2002. Recognition of specific ubiquitin conjugates is important for the proteolytic functions of the ubiquitin-associated domain proteins Dsk2 and Rad23. *J. Biol. Chem.* 277: 11691-11695.
4. Saeki, Y., Sone, T., Toh-e, A., and Yokosawa, H. 2002. Identification of ubiquitin-like protein-binding subunits of the 26S proteasome. *Biochem. Biophys. Res. Commun.* 296: 813-819.

SOURCE

Dsk2 (yS-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Dsk2 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-26459 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.

PROTOCOLS

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

APPLICATIONS

Dsk2 (yS-19) is recommended for detection of Dsk2 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.

RESEARCH USE

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