



Rpt6 (yN-14): sc-27001

BACKGROUND

The 26 S proteasome fulfills the final steps in the ubiquitin-dependent protein degradation pathway by recognizing and hydrolyzing ubiquitylated proteins. The 19S regulatory particle of the yeast 26S proteasome is made up of six related ATPases (Rpt proteins) and at least 11 non-ATPase proteins (Rpn proteins). Rpt6, also referred to as Sug1 or p45, contains a phosphorylation site that may be responsible for the assembly/disassembly of the 26S proteasome. Rpt6 associates with many different substrates, and these interactions lead to the substrate's proteasomal degradation. Rpt6 may function as a direct target of transcriptional activation domains in the 26S proteasome. Rpt6 also directly interacts with the 20S proteasome α -subunit C3 in a phosphorylation-dependent manner.

REFERENCES

1. Barhite, S., Thibault, C. and Miles, M.F. 1998. Phosducin-like protein (PhLP), a regulator of G β function, interacts with the proteasomal protein SUG1. *Biochim. Biophys. Acta* 1402: 95-101.
2. Cheng, L., Roemer, N., Smyth, K.A., Belote, J., Nambu, J.R. and Schwartz, L.M. 1998. Cloning and characterization of Pros45, the *Drosophila* SUG1 proteasome subunit homolog. *Mol. Gen. Genet.* 259: 13-20.
3. Mounkes, L.C. and Fuller, M.T. 1998. The DUG gene of *Drosophila melanogaster* encodes a structural and functional homolog of the *S. cerevisiae* SUG1 predicted ATPase associated with the 26S proteasome. *Gene* 206: 165-174.
4. Masuyama, H. and MacDonald, P.N. 1999. Proteasome-mediated degradation of the vitamin D receptor (VDR) and a putative role for SUG1 interaction with the AF-2 domain of VDR. *J. Cel. Biochem.* 71: 429-40.
5. Su, K., Yang, X., Roos, M.D., Paterson, A.J. and Kudlow, J.E. 2000. Human Sug1/p45 is involved in the proteasome-dependent degradation of Sp1. *Biochem. J.* 348: 281-289.
6. Satoh, K., Sasajima, H., Nyoumura, K.I., Yokosawa, H. and Sawada, H. 2001. Assembly of the 26S proteasome is regulated by phosphorylation of the p45/Rpt6 ATPase subunit. *Biochem.* 40: 314-319.
7. Archer, C.T., Burdine, L. and Kodadek, T. 2006. Identification of GAL4 activation domain-binding proteins in the 26S proteasome by periodate-triggered cross-linking. *Mol. Biosyst.* 1: 366-372.
8. Inoue, T., Kon, T., Ajima, R., Ohkura, R., Tani, M., Yokota, J. and Sutoh, K. 2006. MYO18B interacts with the proteasomal subunit Sug1 and is degraded by the ubi pathway. *Biochem. Biophys. Res. Comm.* 342: 829-34.

SOURCE

Rpt6 (yN-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Rpt6 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.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27001 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rpt6 (yN-14) is recommended for detection of Rpt6 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.

PROTOCOLS

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