SANTA CRUZ BIOTECHNOLOGY, INC.

PSMC6 (K-13): sc-107069

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In eukaryotic cells, selective breakdown of cellular proteins is ensured by their ubiquitination and subsequent degradation by the 26S Proteasome. The 26S Proteasome is a protease complex that selectively breaks down proteins that have been modified by polyubiquitin chains. It is made up of two multi-subunit complexes: the 20S Proteasome chamber, which serves as the proteolytic core of the complex, and two 19S regulatory particles which recognize and unfold ubiquitinated proteins. PSMC6 (proteasome (prosome, macropain) 26S subunit, ATPase 6), also known as P44, p42, SUG2, S10B or CADP44, is a regulatory component of the 26S Proteasome. More specifically, PSMC6 is one of the six ATPase subunits of the 19S regulator base. It contains a leucine zipper motif and an AAA (ATPase associated with diverse cellular activities) domain and belongs to the AAA ATPase family of chaperone-like ATPases.

REFERENCES

1. Bauer, V.W., et al. 1996. CADp44: a novel regulatory subunit of the 26S Proteasome and the mammalian homolog of yeast Sug2p. Gene 181: 63-69.
2. Fujiwara, T., et al. 1996. cDNA cloning of p42, a shared subunit of two proteasome regulatory proteins, reveals a novel member of the AAA protein family. FEBS Lett. 387: 184-188.
3. DeMartino, G.N., et al. 1996. Identification, purification, and characterization of a PA700-dependent activator of the proteasome. J. Biol. Chem. 271: 3112-3118.
4. Tanahashi, N., et al. 1998. Chromosomal localization and immunological analysis of a family of human 26S Proteasomal ATPases. Biochem. Biophys. Res. Commun. 243: 229-232.
5. Hastings, R.A., et al. 1999. A 220-kDa activator complex of the 26S Proteasome in insects and humans. A role in type II programmed insect muscle cell death and cross-activation of proteasomes from different species. J. Biol. Chem. 274: 25691-25700.
6. Hastings, R., et al. 1999. Activator complexes containing the proteasomal regulatory ATPases S10b (SUG2) and S6 (TBP1) in different tissues and organisms. Mol. Biol. Rep. 26: 35-38.
7. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602708. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
8. Adori, C., et al. 2006. Subcellular distribution of components of the ubiquitin-proteasome system in non-diseased human and rat brain. J. Histochem. Cytochem. 54: 263-267.
9. Jincho, Y., et al. 2008. Identification of genes aberrantly expressed in mouse embryonic stem cell-cloned blastocysts. Biol. Reprod. 78: 568-576.

CHROMOSOMAL LOCATION

Genetic locus: PSMC6 (human) mapping to 14q22.1; Psmc6 (mouse) mapping to 14 C1.

SOURCE

PSMC6 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PSMC6 of human 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-107069 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PSMC6 (K-13) is recommended for detection of PSMC6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PSMC6 (K-13) is also recommended for detection of PSMC6 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PSMC6 siRNA (h): sc-92282, PSMC6 siRNA (m): sc-152557, PSMC6 shRNA Plasmid (h): sc-92282-SH, PSMC6 shRNA Plasmid (m): sc-152557-SH, PSMC6 shRNA (h) Lentiviral Particles: sc-92282-V and PSMC6 shRNA (m) Lentiviral Particles: sc-152557-V.

Molecular Weight of PSMC6: 44 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

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. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.