

# SUG1 (E-15): sc-79117

## BACKGROUND

The 26S Proteasome is a highly ordered proteinase complex consisting of a 20S core and a 19S regulator. While the core is responsible for the proteolytic activity of the proteasome, the regulator contains several ATPase subunits which function in the ATP-dependent degradation of ubiquitinated proteins and confer substrate specificity to the 26S complex. SUG1, also known as PSMC5 (Proteasome 26S subunit ATPase 5), p45 or S8, is an ATPase subunit that is an integral part of the 26S Proteasome complex. Localized to the cytoplasm and nucleus, SUG1 is part of the 19S regulator and functions in the ubiquitin/proteasome-mediated degradation of proteins (specifically receptors) found in the endoplasmic reticulum (ER). Recent studies suggest that assembly of the 26S Proteasome is dependent upon phosphorylation of SUG1 by a protein kinase. *In vitro*, SUG1 also interacts with RXR (retinoid X receptor) and TR (thyroid hormone receptor), suggesting a possible role in transcriptional regulation.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: PSMC5 (human) mapping to 17q23.3; Psmc5 (mouse) mapping to 11 E1.

## SOURCE

SUG1 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SUG1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-79117 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SUG1 (E-15) is recommended for detection of SUG1 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).

Suitable for use as control antibody for SUG1 siRNA (h): sc-76603, SUG1 siRNA (m): sc-76604, SUG1 shRNA Plasmid (h): sc-76603-SH, SUG1 shRNA Plasmid (m): sc-76604-SH, SUG1 shRNA (h) Lentiviral Particles: sc-76603-V and SUG1 shRNA (m) Lentiviral Particles: sc-76604-V.

Molecular Weight of SUG1: 45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or LADMAC whole cell lysate.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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](http://www.scbt.com) or our catalog for detailed protocols and support products.