

# SUGT1 (YQ-R3): sc-81822

## BACKGROUND

SUGT1 (suppressor of G<sub>2</sub> allele of Skp1 p19 homolog, *S. cerevisiae*), also known as SGT1, is a homolog of the yeast protein Sgt1, a regulator of the cell cycle that is essential for G<sub>1</sub>/S and G<sub>2</sub>/M transitions. SUGT1 is a highly soluble protein and shares 26% overall amino acid identity and 30% overall similarity with its yeast counterpart. Localizing to the nucleus and cytoplasm, SUGT1 contains a CS domain, a SGS domain, a p23 domain and three tetratricopeptide repeats (TPR). The function of SUGT1 is conserved across eukaryotes. SUGT1 associates with Skp1 p19 and CUL1, subunits of the SCF (Skp1-Cullin-F-box) ubiquitin ligase complex, and is believed to play a role in protein degradation. In addition, SUGT1 is required for the assembly of kinetochores and functions as a co-chaperone for HSP 90. An additional isoform, SUGT1B (also known as SGT1B), exists for SUGT1 due to alternative splicing events.

## REFERENCES

1. Kitagawa, K., et al. 1999. SGT1 encodes an essential component of the yeast kinetochore assembly pathway and a novel subunit of the SCF ubiquitin ligase complex. *Mol. Cell* 4: 21-33.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604098. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: SUGT1 (human) mapping to 13q14.3; Sgt1 (mouse) mapping to 14 D3.

## SOURCE

SUGT1 (YQ-R3) is a mouse monoclonal antibody raised against recombinant SUGT1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SUGT1 (YQ-R3) is recommended for detection of SUGT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 SUGT1 siRNA (h): sc-76605, SUGT1 siRNA (m): sc-153916, SUGT1 shRNA Plasmid (h): sc-76605-SH, SUGT1 shRNA Plasmid (m): sc-153916-SH, SUGT1 shRNA (h) Lentiviral Particles: sc-76605-V and SUGT1 shRNA (m) Lentiviral Particles: sc-153916-V.

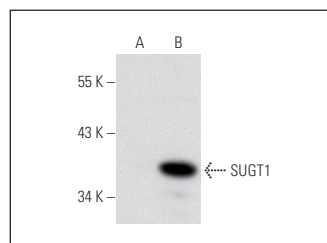
Molecular Weight of SUGT1: 38 kDa.

Positive Controls: SUGT1 (h): 293 Lysate: sc-110596, SUGT1 (m): 293T Lysate: sc-110248 or HeLa whole cell lysate: sc-2200.

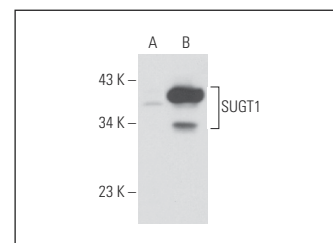
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

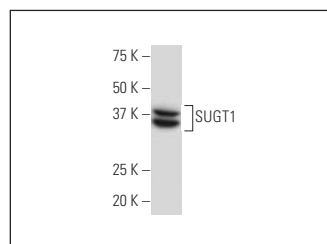
## DATA



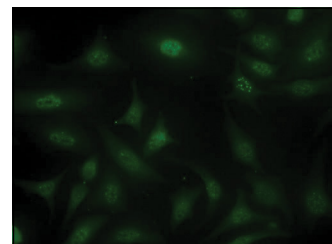
SUGT1 (YQ-R3): sc-81822. Western blot analysis of SUGT1 expression in non-transfected: sc-110760 (A) and human SUGT1 transfected: sc-110596 (B) 293 whole cell lysates.



SUGT1 (YQ-R3): sc-81822. Western blot analysis of SUGT1 expression in non-transfected: sc-117752 (A) and mouse SUGT1 transfected: sc-110248 (B) 293T whole cell lysates.



SUGT1 (YQ-R3): sc-81822. Western blot analysis of SUGT1 expression in HeLa whole cell lysate.



SUGT1 (YQ-R3): sc-81822. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Li, Y., et al. 2020. Long noncoding RNA SAM promotes myoblast proliferation through stabilizing Sgt1 and facilitating kinetochore assembly. *Nat. Commun.* 11: 2725.
2. He, Z., et al. 2023. Sgt1 loss in skeletal muscle stem cells impairs muscle regeneration and causes premature muscle aging. *Life Med.* 2: Inad039.

## 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.