

SGTA (F-7): sc-374031

BACKGROUND

SGTA (small glutamine-rich tetratricopeptide repeat (TPR)-containing protein A or α), also known as SGT, hSGT or UBP (Vpu-binding protein), is a ubiquitously expressed protein that contains three TPR protein-protein interaction repeats. SGTA is believed to function as a component of the androgen receptor (AR)-chaperone-co-chaperone complex, acting as a co-chaperone involved in androgen signaling. More specifically, SGTA binds to the hinge region of the AR functions to retain the AR in the cytoplasm, thereby inhibiting androgen signaling. In addition, SGTA functions as a co-chaperone for HSP 90 and HSP 70, two proteins known to participate in apoptosis. On the basis of its role in apoptosis and androgen signaling, SGTA is a potential candidate for PCOS (polycystic ovary syndrome), a disorder characterized by androgen excess, obesity and menstrual disturbances. SGTA also interacts with the nonstructural Parvovirus protein NS1 and the HIV-1 proteins Vpu and $G_{\alpha\gamma}$.

REFERENCES

- Kordes, E., et al. 1998. Isolation and characterization of human SGT and identification of homologues in *Saccharomyces cerevisiae* and *Caenorhabditis elegans*. *Genomics* 52: 90-94.
- Tobaben, S., et al. 2001. A trimeric protein complex functions as a synaptic chaperone machine. *Neuron* 31: 987-999.
- Angeletti, P.C., et al. 2002. Small glutamine-rich protein/viral protein U-binding protein is a novel cochaperone that affects heat shock protein 70 activity. *Cell Stress Chaperones* 7: 258-268.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603419. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Tobaben, S., et al. 2003. A brain-specific isoform of small glutamine-rich tetratricopeptide repeat-containing protein binds to Hsc70 and the cysteine string protein. *J. Biol. Chem.* 278: 38376-38383.
- Liou, S.T., et al. 2005. Small glutamine-rich tetratricopeptide repeat-containing protein is composed of three structural units with distinct functions. *Arch. Biochem. Biophys.* 435: 253-263.
- Yin, H., et al. 2006. SGT, a Hsp90 β binding partner, is accumulated in the nucleus during cell apoptosis. *Biochem. Biophys. Res. Commun.* 343: 1153-1158.
- Buchanan, G., et al. 2007. Control of androgen receptor signaling in prostate cancer by the cochaperone small glutamine rich tetratricopeptide repeat containing protein α . *Cancer Res.* 67: 10087-10096.

CHROMOSOMAL LOCATION

Genetic locus: SGTA (human) mapping to 19p13.3.

SOURCE

SGTA (F-7) is a mouse monoclonal antibody raised against amino acids 41-120 mapping near the N-terminus of SGTA of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SGTA (F-7) is recommended for detection of SGTA of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 SGTA siRNA (h): sc-97627, SGTA shRNA Plasmid (h): sc-97627-SH and SGTA shRNA (h) Lentiviral Particles: sc-97627-V.

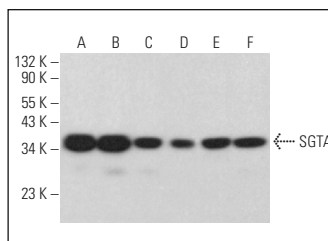
Molecular Weight of SGTA: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEL 92.1.7 cell lysate: sc-2270 or K-562 whole cell lysate: sc-2203.

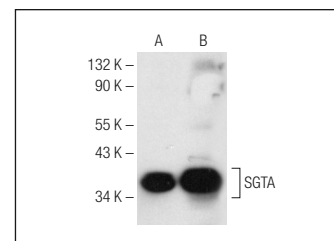
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



SGTA (F-7): sc-374031. Western blot analysis of SGTA expression in HEL 92.1.7 (A), Jurkat (B), NIH/3T3 (C), 3T3-L1 (D), RAW 264.7 (E) and PC-12 (F) whole cell lysates.



SGTA (F-7): sc-374031. Western blot analysis of SGTA expression in HeLa (A) and K-562 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Kubota, S., et al. 2021. SGTA associates with intracellular aggregates in neurodegenerative diseases. *Mol. Brain* 14: 59.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.