

# TSSC3 (E-14): sc-66298

## BACKGROUND

TSSC3 (tumor-suppressing STF cDNA 3 protein), also known as PHLDA2 (pleckstrin homology-like domain family A member 2), BWR1C, HLDA2 or IPL, is a cytoplasmic protein that is involved in fetal and placental growth. Expressed at high levels in placenta and adult prostate, and at low levels in liver, lung and brain, TSSC3 is an apoptosis-related protein that acts as a negative growth regulator and is expressed during normal human development. TSSC3, a protein expressed from the maternal allele, is imprinted on placenta, liver and fetal tissues during embryogenesis and is removed once development is complete. Defects or alterations in the gene encoding TSSC3 are associated with several afflictions such as lung, ovarian and breast cancer, rhabdomyosarcoma, Beckwith-Wiedemann syndrome, Wilms tumor, low birth weight and adrenocortical carcinoma.

## REFERENCES

1. Lee, M.P., et al. 1999. Two novel genes in the center of the 11p15 imprinted domain escape genomic imprinting. *Hum. Mol. Genet.* 8: 683-690.
2. Frank, D., et al. 2002. Placental overgrowth in mice lacking the imprinted gene *Ipl*. *Proc. Natl. Acad. Sci. USA* 99: 7490-7495.
3. Salas, M., et al. 2004. Placental growth retardation due to loss of imprinting of *PHLDA2*. *Mech. Dev.* 121: 1199-1210.
4. Kato, H., et al. 2005. Differential diagnosis between complete and partial mole by TSSC3 antibody completely correlates to DNA diagnosis. *Diagn. Mol. Pathol.* 14: 164-169.
5. McMinn, J., et al. 2006. Unbalanced placental expression of imprinted genes in human intrauterine growth restriction. *Placenta* 27: 540-549.
6. Kim, H.S., et al. 2007. Hypoxia regulates the expression of *PHLDA2* in primary term human trophoblasts. *Placenta* 28: 77-84.
7. Apostolidou, S., et al. 2007. Elevated placental expression of the imprinted *PHLDA2* gene is associated with low birth weight. *J. Mol. Med.* 85: 379-387.

## CHROMOSOMAL LOCATION

Genetic locus: *Phlda2* (mouse) mapping to 7 F5.

## SOURCE

TSSC3 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TSSC3 of mouse 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-66298 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

TSSC3 (E-14) is recommended for detection of TSSC3 of mouse and rat 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).

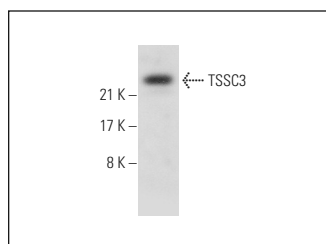
Suitable for use as control antibody for TSSC3 siRNA (m): sc-63176, TSSC3 siRNA (r): sc-156085, TSSC3 shRNA Plasmid (m): sc-63176-SH, TSSC3 shRNA Plasmid (r): sc-156085-SH, TSSC3 shRNA (m) Lentiviral Particles: sc-63176-V and TSSC3 shRNA (r) Lentiviral Particles: sc-156085-V.

Molecular Weight of TSSC3: 17 kDa.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



TSSC3 (E-14): sc-66298. Western blot analysis of TSSC3 expression in HEK293 whole cell lysate.

## 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.