

STELLA (M-150): sc-67249

BACKGROUND

STELLA, also known as DPPA3 and PCG7, is a member of the developmental pluripotency-associated protein family thought to play a key role in embryonic germ cell development. Expressed highly in fetal ovary with lower expression found in the testis and thymus, STELLA contributes to germ cell differentiation and acts as a maternal factor regulating early embryogenesis. In addition to contributing to normal embryonic development, STELLA is overexpressed in testicular germ cell tumors, indicating a possible role in tumor formation. The elevated levels of STELLA observed in carcinoma cells suggest that it may be a novel candidate for early cancer detection.

REFERENCES

1. Saitou, M., et al. 2002. A molecular programme for the specification of germ cell fate in mice. *Nature* 418: 293-300.
2. Payer, B., et al. 2003. STELLA is a maternal effect gene required for normal early development in mice. *Curr. Biol.* 13: 2110-2117.
3. Bowles, J., et al. 2003. DPPA3 is a marker of pluripotency and has a human homologue that is expressed in germ cell tumours. *Cytogenet. Genome Res.* 101: 261-265.
4. Bortvin, A., et al. 2004. DPPA3/PCG7/STELLA is a maternal factor and is not required for germ cell specification in mice. *BMC Dev. Biol.* 4: 2.
5. Tanaka, S.S., et al. 2005. IFITM/Mil/fragilis family proteins IFITM1 and IFITM3 play distinct roles in mouse primordial germ cell homing and repulsion. *Dev. Cell* 9: 745-756.
6. Elliman, S.J., et al. 2005. Adult tissue-specific expression of a DPPA3-derived retrogene represents a postnatal transcript of pluripotent cell origin. *J. Biol. Chem.* 281: 16-19.

CHROMOSOMAL LOCATION

Genetic locus: *Dppa3* (mouse) mapping to 6 F1.

SOURCE

STELLA (M-150) is a rabbit polyclonal antibody raised against amino acids 1-150 representing full length STELLA 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-67249 X, 200 µg/0.1 ml.

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.

APPLICATIONS

STELLA (M-150) is recommended for detection of STELLA of mouse and, to a lesser extent, 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 STELLA siRNA (m): sc-153891, STELLA shRNA Plasmid (m): sc-153891-SH and STELLA shRNA (m) Lentiviral Particles: sc-153891-V.

STELLA (M-150) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

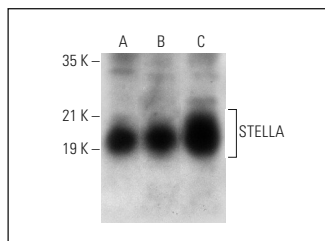
Molecular Weight of STELLA: 20 kDa.

Positive Controls: mouse ovary extract: sc-2404, mouse embryo extract: sc-364239 or mouse testis extract: sc-2405.

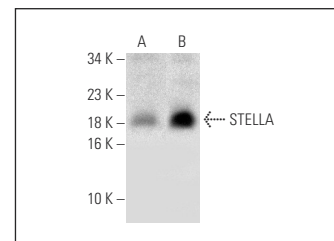
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



STELLA (M-150): sc-67249. Western blot analysis of STELLA expression in mouse ovary (A), mouse embryo (B) and rat embryo (C) tissue extracts.



STELLA (M-150): sc-67249. Western blot analysis of STELLA expression in mouse ovary (A) and mouse testis (B) tissue extracts.

SELECT PRODUCT CITATIONS

1. Shin, D.M., et al. 2010. Molecular signature of adult bone marrow-purified very small embryonic-like stem cells supports their developmental epiblast/germ line origin. *Leukemia* 24: 1450-1461.
2. Chen, S.R., et al. 2013. Disruption of genital ridge development causes aberrant primordial germ cell proliferation but does not affect their directional migration. *BMC Biol.* 11: 22.