# DPPA4 (E-17): sc-74616



The Power to Question

# **BACKGROUND**

DPPA4 (developmental pluripotency associated 4) is a 304 amino acid protein that localizes to the nucleus and is thought to be involved in the maintenance of cell pluripotentiality during embryogenesis. The gene encoding DPPA4 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

# **REFERENCES**

- Braga, E.A., Kashuba, V.I., Maliukova, A.V., Loginov, V.I., Senchenko, V.N., Bazov, I.V., Kiselev, L.L. and Zabarovskii, E.R. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. Mol. Biol. 37: 194-211.
- 2. Bortvin, A., Eggan, K., Skaletsky, H., Akutsu, H., Berry, D.L., Yanagimachi, R., Page, D.C. and Jaenisch, R. 2003. Incomplete reactivation of Oct4-related genes in mouse embryos cloned from somatic nuclei. Development 130: 1673-1680.
- 3. Masaki, H., Nishida, T., Kitajima, S., Asahina, K. and Teraoka, H. 2007. Developmental pluripotency-associated 4 (DPPA4) localized in active chromatin inhibits mouse embryonic stem cell differentiation into a primitive ectoderm lineage. J. Biol. Chem. 282: 33034-33042.
- Maldonado-Saldivia, J., van den Bergen, J., Krouskos, M., Gilchrist, M., Lee, C., Li, R., Sinclair, A.H., Surani, M.A. and Western, P.S. 2007. DPPA2 and DPPA4 are closely linked SAP motif genes restricted to pluripotent cells and the germ line. Stem Cells 25: 19-28.
- 5. Chakravarthy, H., Boer, B., Desler, M., Mallanna, S.K., McKeithan, T.W. and Rizzino, A. 2008. Identification of DPPA4 and other genes as putative Sox2: Oct-3/4 target genes using a combination of *in silico* analysis and transcription-based assays. J. Cell. Physiol. 216: 651-662.

#### CHROMOSOMAL LOCATION

Genetic locus: Dppa4 (mouse) mapping to 16 B5.

# **SOURCE**

DPPA4 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DPPA4 of mouse origin.

# **PRODUCT**

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

Blocking peptide available for competition studies, sc-74616 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-74616 X, 200  $\mu g/0.1$  ml.

#### **APPLICATIONS**

DPPA4 (E-17) is recommended for detection of DPPA4 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 DPPA4 siRNA (m): sc-77179, DPPA4 shRNA Plasmid (m): sc-77179-SH and DPPA4 shRNA (m) Lentiviral Particles: sc-77179-V.

DPPA4 (E-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

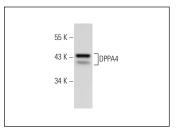
Molecular Weight of DPPA4: 34 kDa.

Positive Controls: F9 cell lysate: sc-2245.

# **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



DPPA4 (E-17): sc-74616. Western blot analysis of DPPA4 expression in F9 whole cell lysate.

#### **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 or our catalog for detailed protocols and support products.

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