

Ovol1 (L-12): sc-132764

BACKGROUND

The Ovo family of zinc-finger transcription factors encode evolutionarily conserved genes including those from *Caenorhabditis elegans*, *Drosophila melanogaster*, mouse and human. Members of the Ovo family include Ovol1 and Ovol2. Ovol1 acts as a transcriptional repressor by interacting with key developmental signaling pathways such as Wnt and TGF- β /BMP. Specifically, Ovol1 represses c-Myc and Id2 genes and establishes a balance between proliferation and differentiation of progenitor cells. Deletion of Ovol1 in mice leads to germ cell degeneration and defective sperm production in adult males. Ovol1 has also been shown to repress itself as well as Ovol2, which is thought to regulate neural development and vascular angiogenesis during embryogenesis.

REFERENCES

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- Li, B., et al. 2005. Ovol1 regulates meiotic pachytene progression during spermatogenesis by repressing Id2 expression. *Development* 132: 1463-1473.
- Mackay, D.R., et al. 2006. The mouse Ovol2 gene is required for cranial neural tube development. *Dev. Biol.* 291: 38-52.
- Nair, M., et al. 2006. Ovol1 regulates the growth arrest of embryonic epidermal progenitor cells and represses c-myc transcription. *J. Cell Biol.* 173: 253-264.
- Teng, A., et al. 2007. Strain-dependent perinatal lethality of Ovol1-deficient mice and identification of Ovol2 as a downstream target of Ovol1 in skin epidermis. *Biochim. Biophys. Acta* 1772: 89-95.
- Unezaki, S., et al. 2007. Ovol2/Movo, a homologue of *Drosophila ovo*, is required for angiogenesis, heart formation and placental development in mice. *Genes Cells* 12: 773-785.
- Nair, M., et al. 2007. Ovol1 represses its own transcription by competing with transcription activator c-Myb and by recruiting histone deacetylase activity. *Nucleic Acids Res.* 35: 1687-1697.

CHROMOSOMAL LOCATION

Genetic locus: OVOL1 (human) mapping to 11q13.1; Ovol1 (mouse) mapping to 19 A.

SOURCE

Ovol1 (L-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ovol1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-132764 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ovol1 (L-12) is recommended for detection of Ovol1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with Ovol2.

Ovol1 (L-12) is also recommended for detection of Ovol1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Ovol1 siRNA (h): sc-96293, Ovol1 siRNA (m): sc-151947, Ovol1 shRNA Plasmid (h): sc-96293-SH, Ovol1 shRNA Plasmid (m): sc-151947-SH, Ovol1 shRNA (h) Lentiviral Particles: sc-96293-V and Ovol1 shRNA (m) Lentiviral Particles: sc-151947-V.

Molecular Weight (predicted) of Ovol1: 30 kDa.

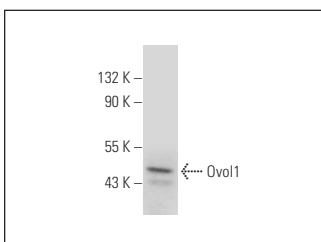
Molecular Weight (observed) of Ovol1: 43 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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



Ovol1 (L-12): sc-132764. Western blot analysis of Ovol1 expression in Hep G2 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.