

# Oct-6 (H-13): sc-11660

## BACKGROUND

POU homeodomain proteins are transcriptional regulators that function in various developmental processes (e.g. cell division, differentiation, specification and survival of specific cell types) and participate in the determination of cell fate. The 45 kDa POU transcription factor Oct-6 (also designated SCIP and Tst-1) is expressed by late embryonic Schwann cells of the peripheral nervous system and is also expressed by nonmyelinating Schwann cells in adults. Oct-6 is strongly upregulated in promyelinating cells because it is required for the timely differentiation of promyelinating cells into myelinating cells. Oct-6 functions during myelination and is required for the proper downregulation of its own gene when myelination proceeds. c-Myc can act synergistically with the POU domain of Oct-6 to produce myelin disease pathogenesis in the mammalian central nervous system.

## REFERENCES

1. Meijer, D., et al. 1990. The octamer binding factor Oct-6: cDNA cloning and expression in early embryonic cells. *Nucleic Acids Res.* 18: 7357-7365.
2. Monuki, E.S., et al. 1990. Expression and activity of the POU transcription factor SCIP. *Science* 249: 1300-1303.
3. Blanchard, A.D., et al. 1996. Oct-6 (SCIP/Tst-1) is expressed in Schwann cell precursors, embryonic Schwann cells, and postnatal myelinating Schwann cells: comparison with Oct-1, Krox-20, and Pax-3. *J. Neurosci. Res.* 46: 630-640.
4. Jaegle, M., et al. 1998. Role of Oct-6 in Schwann cell differentiation. *Microsc. Res. Tech.* 41: 372-378.
5. Jensen, N.A., et al. 1998. Neurological disturbances, premature lethality, and central myelination deficiency in transgenic mice overexpressing the homeodomain transcription factor Oct-6. *J. Clin. Invest.* 101: 1292-1299.
6. Levavasseur, F., et al. 1998. Comparison of sequence and function of the Oct-6 genes in zebrafish, chicken and mouse. *Mech. Dev.* 74: 89-98.
7. Jensen, N.A., et al. 1999. Oligodendrocyte programmed cell death and central myelination deficiency induced in transgenic mice by synergism between c-Myc and Oct-6. *J. Biol. Chem.* 274: 29921-29926.
8. Mandemakers, W., et al. 1999. Transcriptional regulation of the POU gene Oct-6 in Schwann cells. *Adv. Exp. Med. Biol.* 468: 13-22.
9. Jaegle, M., et al. The POU factor Oct-6 and Schwann cell differentiation. *Science* 273: 507-510.

## CHROMOSOMAL LOCATION

Genetic locus: POU3F1 (human) mapping to 1p34.3; Pou3f1 (mouse) mapping to 4 D2.2.

## SOURCE

Oct-6 (H-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Oct-6 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-11660 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-11660 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Oct-6 (H-13) is recommended for detection of Oct-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 Oct-6 siRNA (h): sc-38774, Oct-6 siRNA (m): sc-38775, Oct-6 shRNA Plasmid (h): sc-38774-SH, Oct-6 shRNA Plasmid (m): sc-38775-SH, Oct-6 shRNA (h) Lentiviral Particles: sc-38774-V and Oct-6 shRNA (m) Lentiviral Particles: sc-38775-V.

Oct-6 (H-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Oct-6: 45 kDa.

Positive Controls: SK-MEL-28 cell lysate: sc-2236.

## SELECT PRODUCT CITATIONS

1. Cheng, Y.H., et al. 2004. Isolation and characterization of the human syn-cytin gene promoter. *Biol. Reprod.* 70: 694-701.
2. Romano, R.A., et al. 2006. Defining the regulatory elements in the proximal promoter of  $\Delta$ Np63 in keratinocytes: Potential roles for Sp1/Sp3, NF-Y, and p63. *J. Invest. Dermatol.* 126: 1469-1479.
3. Wang, Z.X., et al. 2007. Oct-4 and Sox-2 directly regulate expression of another pluripotency transcription factor, Zfp206, in embryonic stem cells. *J. Biol. Chem.* 282: 12822-12830.
4. Jin, Z., et al. 2009. Different transcription factors regulate nestin gene expression during p19 cell neural differentiation and central nervous system development. *J. Biol. Chem.* 102: 8160-8173.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Oct-6 (B-7): sc-376143** or **Oct-6 (A-8): sc-376093**, our highly recommended monoclonal alternatives to Oct-6 (H-13).