

# Oct-6 (B-7): sc-376143

## 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 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. 1996. The POU factor Oct-6 and Schwann cell differentiation. *Science* 273: 507-510.
5. Jaegle, M., et al. 1998. Role of Oct-6 in Schwann cell differentiation. *Microsc. Res. Tech.* 41: 372-378.

## CHROMOSOMAL LOCATION

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

## SOURCE

Oct-6 (B-7) is a mouse monoclonal antibody raised against amino acids 111-160 mapping within an internal region of Oct-6 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain 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-376143 X, 200 µg/0.1 ml.

Oct-6 (B-7) is available conjugated to agarose (sc-376143 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376143 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376143 PE), fluorescein (sc-376143 FITC), Alexa Fluor® 488 (sc-376143 AF488), Alexa Fluor® 546 (sc-376143 AF546), Alexa Fluor® 594 (sc-376143 AF594) or Alexa Fluor® 647 (sc-376143 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376143 AF680) or Alexa Fluor® 790 (sc-376143 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Oct-6 (B-7) is recommended for detection of Oct-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

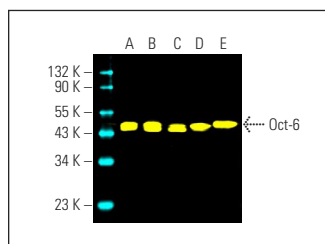
Suitable for use as control antibody for Oct-6 siRNA (h): sc-38774, Oct-6 siRNA (m): sc-38775, Oct-6 shRNA Plasmid (h): sc-38774-SH, Oct-6 shRNA Plasmid (m): sc-38775-SH, Oct-6 shRNA (h) Lentiviral Particles: sc-38774-V and Oct-6 shRNA (m) Lentiviral Particles: sc-38775-V.

Oct-6 (B-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

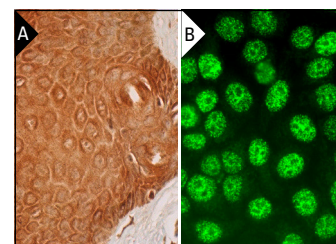
Molecular Weight of Oct-6: 46 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, BYDP whole cell lysate: sc-364368 or WEHI-231 whole cell lysate: sc-2213.

## DATA



Oct-6 (B-7) Alexa Fluor® 488: sc-376143 AF488. Direct fluorescent western blot analysis of Oct-6 expression in Jurkat (A), K-562 (B), MOLT-4 (C), BYDP (D) and WEHI-231 (E) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 647: sc-516791.



Oct-6 (B-7): sc-376143. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing nuclear and cytoplasmic staining of epidermal cells (A). Immunofluorescence staining of formalin-fixed Hela cells showing nuclear localization (B).

## SELECT PRODUCT CITATIONS

1. Huang, X., et al. 2017. Zfp281 is essential for mouse epiblast maturation through transcriptional and epigenetic control of Nodal signaling. *Elife* 6: e33333.
2. Zhang, Y., et al. 2021. FGF21 impedes peripheral myelin development by stimulating p38 MAPK/c-Jun axis. *J. Cell. Physiol.* 236: 1345-1361.

## 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.