

#2788 Store at -20°C

Oct-4 (V241) Antibody



✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID # 5460
Swiss-Prot Acc. # Q01860

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, (MK)	45 kDa	Rabbit**

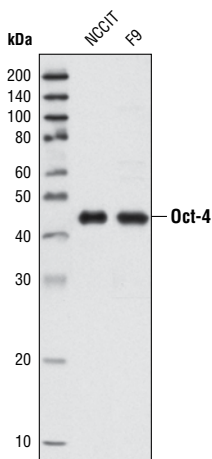
Background: Oct-4 (POU5F1) is a transcription factor highly expressed in undifferentiated embryonic stem cells and embryonic germ cells (1). A network of key factors that includes Oct-4, Nanog, and Sox2 is necessary for the maintenance of pluripotent potential, and downregulation of Oct-4 has been shown to trigger cell differentiation (2,3). Oct-4 is a useful germ cell tumor marker (4). Oct-4 exists as two splice variants, Oct-4A and Oct-4B (5). Recent studies have suggested that it is the Oct-4A isoform that has the ability to confer and sustain pluripotency, and that Oct-4B may exist in some somatic, non-pluripotent cells (6,7).

Specificity/Sensitivity: Oct-4 (V241) Antibody detects endogenous levels of total Oct-4 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids surrounding Val241 of human Oct-4. Antibodies are purified by peptide affinity chromatography.

Background References:

- (1) Looijenga, L.H. et al. (2003) *Cancer Res.* 63, 2244–2250.
- (2) Pesce, M. and Schöler, H.R. (2001) *Stem Cells* 19, 271–278.
- (3) Pan, G. and Thomson, J.A. (2007) *Cell Res.* 17, 42–49.
- (4) Cheng, L. et al. (2007) *J. Pathol.* 211, 1–9.
- (5) Takeda, J. et al. (1992) *Nucleic Acids Res.* 20, 4613–4620.
- (6) Cauffman, G. et al. (2006) *Stem Cells* 24, 2685–2691.
- (7) Lee, J. et al. (2006) *J. Biol. Chem.* 281, 33554–33565.



Western blot analysis of extracts from NCCIT and F9 cells using Oct-4 (V241) Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.