

Product datasheet for **TA301457**

Oct4 (POU5F1) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, ICC/IF, IHC, WB
Recommended Dilution:	Flow Cytometry: 1:50-1:200, Immunocytochemistry/ Immunofluorescence: 1:50-1:200, Western Blot, Immunohistochemistry-Paraffin: 1:200
Reactivity:	Human, Monkey
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	A synthetic peptide made to an internal portion of the human OCT4 protein sequence (between residues 100-200).
Formulation:	Tris-glycine, 150mM NaCl and 0.05% sodium azide
Concentration:	lot specific
Purification:	Affinity purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	POU class 5 homeobox 1
Database Link:	NP_002692 Entrez Gene 714760 Monkey Entrez Gene 5460 Human Q01860

Background: Stem cells are crucial ingredients in the progressive restriction of cellular developmental capacity during mammalian embryogenesis. Until recently, only embryonic stem cells (ESC) had been shown to exhibit the potential to differentiate into cells of the all three germ layers. However, adult stem cells (ASC) can regain pluripotency (potential to differentiate into various lineages) if transferred from one stem-cell microenvironment into another. The transcription factor OCT4, expressed in ESCs and germ cells, is strongly implicated in the process of maintaining as well as regaining stem-cell pluripotency and functions as a key regulator of mammalian germline development.

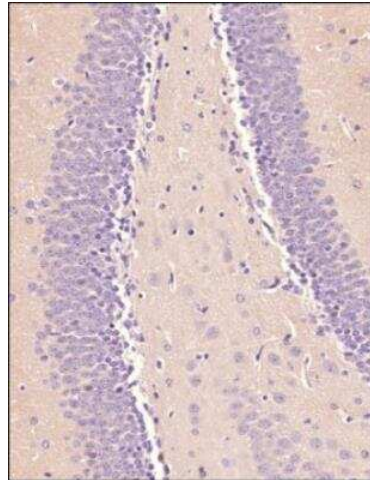


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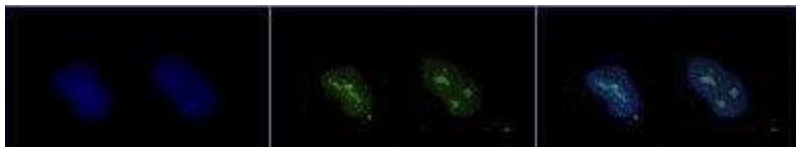
Synonyms: Oct-3; Oct-4; OCT3; OCT4; OTF-3; OTF3; OTF4

Protein Families: Adult stem cells, Cancer stem cells, Embryonic stem cells, Induced pluripotent stem cells, Stem cell - Pluripotency, Transcription Factors

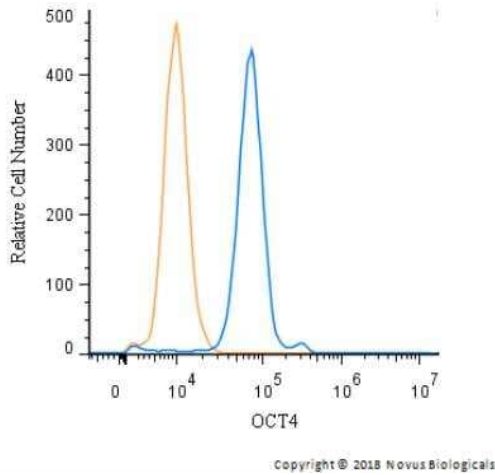
Product images:



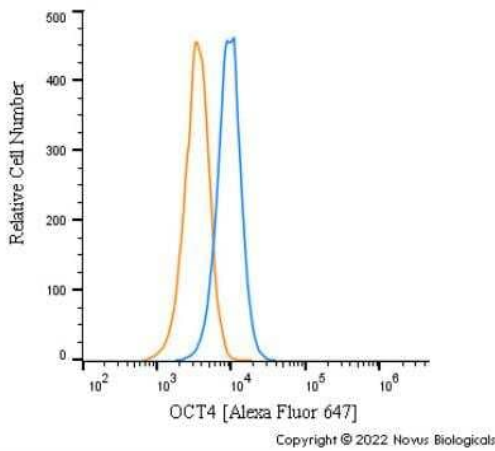
Immunohistochemistry-Paraffin: OCT4 Antibody TA301457 - Analysis of a FFPE tissue section of mouse brain using 1:200 dilution of OCT4 antibody. The staining was developed using HRP labeled anti-rabbit secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin.



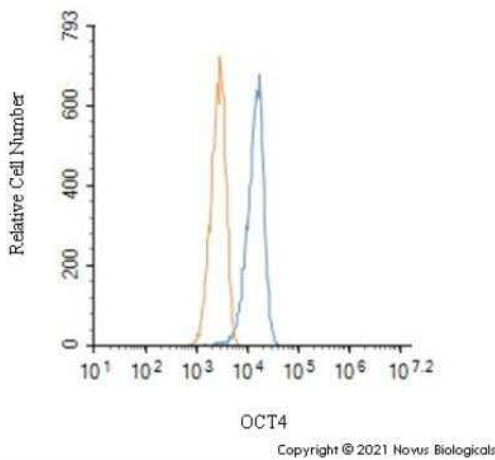
Immunocytochemistry/Immunofluorescence: OCT4 Antibody TA301457 - Ntera2 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.5% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti-TA301457 at 1 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.



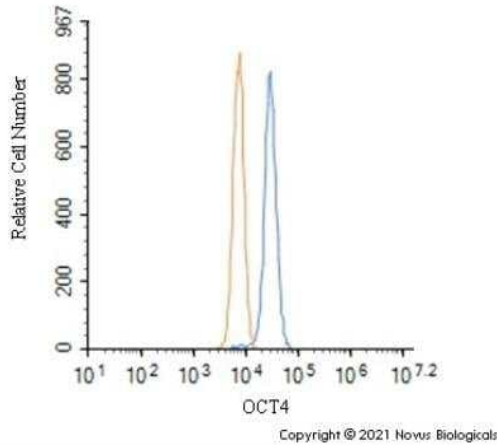
Flow Cytometry: OCT4 Antibody TA301457 - An intracellular stain was performed on Jurkat with TA301457 and a matched isotype control. Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody.



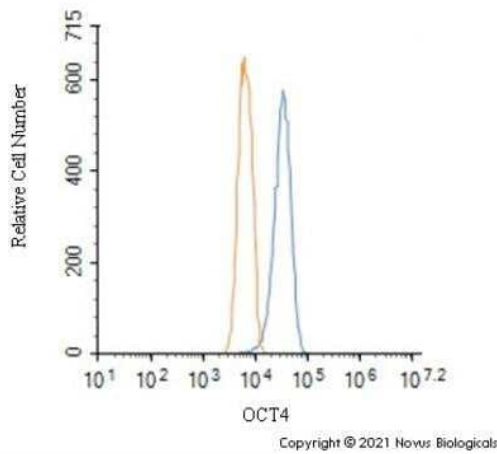
Flow Cytometry: OCT4 Antibody - BSA Free TA301457 - An intracellular stain was performed on U2-OS cells with OCT4 TA301457AF647 (blue) and a matched isotype control NBP2-24891 (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.



Flow Cytometry: OCT4 Antibody TA301457 - An intracellular stain was performed on Jurkat cells with OCT4 Antibody TA301457 (blue) and a matched isotype control NBP2-24891 (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1.0 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (SA5-10033, Thermo Fisher).

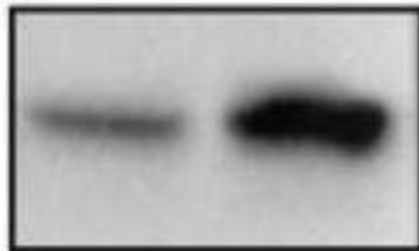


Flow Cytometry: OCT4 Antibody TA301457 - An intracellular stain was performed on Ntera2 cells with OCT4 Antibody TA301457 (blue) and a matched isotype control NBP2-24891 (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1.0 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (SA5-10033, Thermo Fisher).

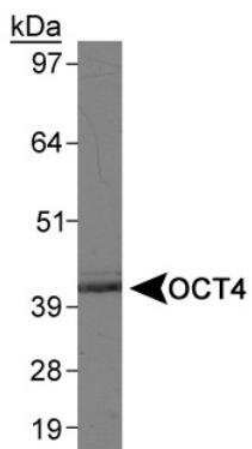


Flow Cytometry: OCT4 Antibody TA301457 - An intracellular stain was performed on Neuro2a cells with OCT4 Antibody TA301457 (blue) and a matched isotype control NBP2-24891 (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1.0 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (SA5-10033, Thermo Fisher).

Oct4



Western Blot: OCT4 Antibody TA301457 - The expression of pluripotency factors Oct4 in human head and neck cancer cell lines.



Western Blot: OCT4 Antibody TA301457 - WB detection of OCT4 in mouse brain lysate using OCT4 antibody with ECL based detection. The antibody generated a specific band of OCT4 at the expected ~40kDa position.