

# OCT4 Monoclonal antibody

Catalog Number: 60242-1-Ig 31 Publications

## Basic Information

<b>Catalog Number:</b> 60242-1-Ig	<b>GenBank Accession Number:</b> BC020712	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 1000 µg/ml	<b>GeneID (NCBI):</b> 5460	<b>CloneNo.:</b> 1C4B6
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> Q01860	<b>Recommended Dilutions:</b> WB 1:5000-1:20000 IHC 1:250-1:1000
<b>Isotype:</b> IgG1	<b>Full Name:</b> POU class 5 homeobox 1	
<b>Immunogen Catalog Number:</b> AG1794	<b>Calculated MW:</b> 39 kDa <b>Observed MW:</b> 50-52 kDa	

## Applications

<b>Tested Applications:</b> IHC, WB, ELISA	<b>Positive Controls:</b>
<b>Cited Applications:</b> IF, IHC, WB	<b>WB:</b> HEK-293 cells, human brain tissue, NCCIT cells, Neuro-2a cells, L02 cells, NIH/3T3 cells
<b>Species Specificity:</b> human, mouse, rat	<b>IHC:</b> human breast cancer tissue, human colon cancer tissue
<b>Cited Species:</b> human, rat, mouse	
<b>Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0</b>	

## Background Information

Expression of the OCT4 transcription factor is associated with an undifferentiated phenotype of human and mouse embryonic stem cells and germ cells. OCT4 (Octamer-4) is a homeodomain transcription factor of the POU family (POU5F1) involved in regulation of pluripotency during normal development and is detectable in embryonic stem (ES) and germ cells. Its expression is associated with an undifferentiated phenotype and tumors. In fact, gene knockdown of OCT4 promotes differentiation, thereby demonstrating a role for this factor in human ES cell self-renewal. As such, it is frequently used as a marker for undifferentiated ES cells or iPS (induced pluripotent stem) cells. OCT4 is one of the four key transcription factors (OCT4, SOX2, c-MYC, and KLF4) used to reprogram mouse and human fibroblasts to a pluripotent state as well as generate patient-specific iPS cells. The calculated molecular weight of OCT4 is 38 kDa, but the modified OCT4 protein is about 50 kDa.

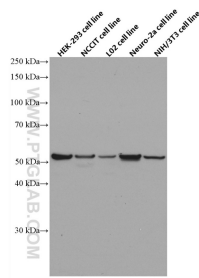
## Notable Publications

Author	Pubmed ID	Journal	Application
Qian Luo	36175708	Med Oncol	WB
Ting Tang	33173989	Mol Med Rep	WB
Shuiqing Liu	34715882	J Hematol Oncol	WB

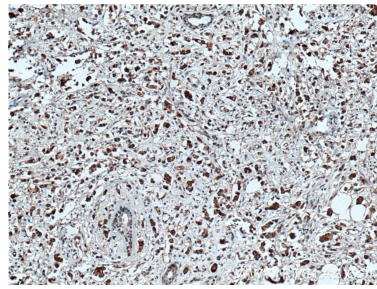
## Storage

**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.  
Aliquoting is unnecessary for -20°C storage

## Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 60242-1-Ig (OCT4 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 60242-1-Ig (OCT4 antibody) at dilution of 1:500 (under 10x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0)).