

For Research Use Only

OCT4 Monoclonal antibody

Catalog Number: 60242-1-Ig **31 Publications**



Basic Information

Catalog Number: 60242-1-Ig	GenBank Accession Number: BC020712	Purification Method: Protein A purification
Size: 150ul , Concentration: 1500 µg/ml by Nanodrop and 1000 µg/ml by Bradford method using BSA as the standard;	GeneID (NCBI): 5460	CloneNo.: 1C4B6
Source: Mouse	Full Name: POU class 5 homeobox 1	Recommended Dilutions: WB 1:5000-1:20000 IHC 1:250-1:1000
Isotype: IgG1	Calculated MW: 39 kDa	
Immunogen Catalog Number: AG1794	Observed MW: 50-52 kDa	

Applications

Tested Applications:

IHC, WB, ELISA

Cited Applications:

IF, IHC, WB

Species Specificity:

human, mouse, rat

Cited Species:

human, rat, mouse

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : HEK-293 cells, NCCIT cells, HT-29 cells, human brain tissue, Neuro-2a cells, LO2 cells, NIH/3T3 cells

IHC : human breast cancer tissue, human colon cancer tissue

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

*** 20ul sizes contain 0.1% BSA

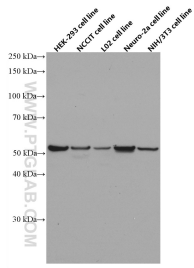
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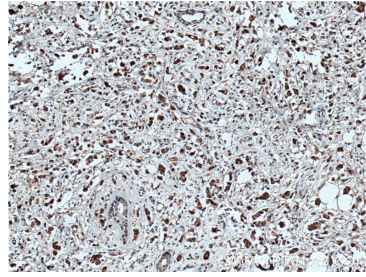
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Selected Validation Data



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).