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Oct4 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1471a

Specification

Oct4 Antibody - Product Information

Application	**WB, IF, FC**
Primary Accession	Q01860
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**45kDa KDa**

Description
This gene encodes a transcription factor containing a POU homeodomain. This transcription factor plays a role in embryonic development, especially during early embryogenesis, and it is necessary for embryonic stem cell pluripotency. A translocation of this gene with the Ewing's sarcoma gene, t(6;22)(p21;q12), has been linked to tumor formation. Alternative splicing, as well as usage of alternative translation initiation codons, results in multiple isoforms, one of which initiates at a non-AUG (CUG) start codon. Related pseudogenes have been identified on chromosomes 1, 3, 8, 10, and 12. (provided by RefSeq).Tissue specificity: Expressed in developing brain. Highest levels found in specific cell layers of the cortex, the olfactory bulb, the hippocampus and the cerebellum. Low levels of expression in adult tissues.

Immunogen
Synthesized peptide derived from internal of human Oct4.

Formulation
Ascitic fluid containing 0.03% sodium azide.

Oct4 Antibody - Additional Information

Gene ID 5460

Other Names
POU domain, class 5, transcription factor 1, Octamer-binding protein 3, Oct-3, Octamer-binding protein 4, Oct-4, Octamer-binding transcription factor 3, OTF-3, POU5F1, OCT3, OCT4, OTF3

Dilution
WB~~1/500 - 1/2000
IF~~1/200 - 1/1000
FC~~1/200 - 1/400

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Oct4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Oct4 Antibody - Protein Information

Name POU5F1

Synonyms OCT3, OCT4, OTF3

Function
Transcription factor that binds to the octamer motif (5'- ATTTGCAT-3'). Forms a trimeric complex with SOX2 or SOX15 on DNA and controls the expression of a number of genes involved in embryonic development such as YES1, FGF4, UTF1 and ZFP206. Critical for early embryogenesis and for embryonic stem cell pluripotency.

Cellular Location
Cytoplasm. Nucleus. Note=Expressed in a diffuse and slightly punctuate pattern. Colocalizes with MAPK8 and MAPK9 in the nucleus. {ECO:0000250|UniProtKB:P20263, ECO:0000269|PubMed:18191611, ECO:0000269|PubMed:19274063, ECO:0000269|PubMed:23024368}

Tissue Location
Expressed in developing brain. Highest levels found in specific cell layers of the cortex, the olfactory bulb, the hippocampus and the cerebellum. Low levels of expression in adult tissues.

Oct4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Oct4 Antibody - Images

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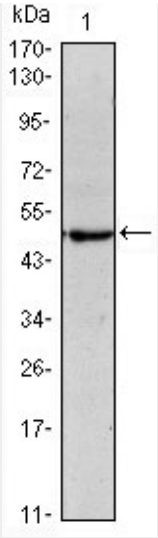

Figure 1: Western blot analysis using Oct4 mouse mAb against NTERA-2 (1) cell lysate.

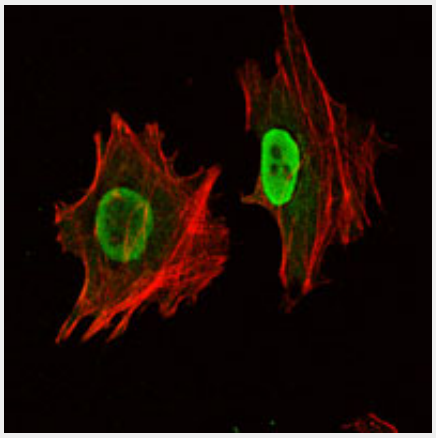

Figure 2: Immunofluorescence analysis of NTERA-2 cells using Oct4 mouse mAb (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

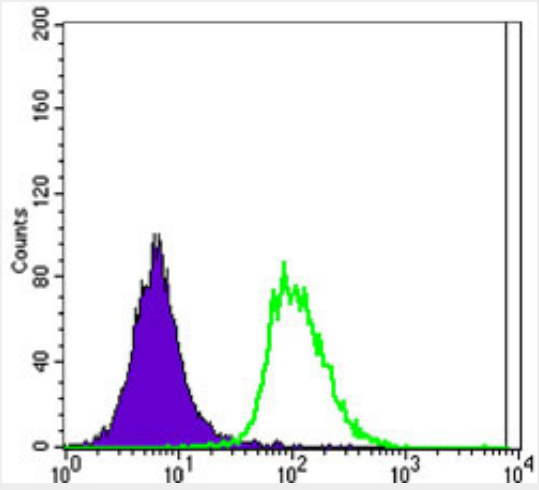

Figure 3: Flow cytometric analysis of Jurkat cells using Oct4 mouse mAb (green) and negative control (purple).

Oct4 Antibody - References

1. Stem Cells. 2010 May;28(5):885-93. 2. Mol Med. 2010 Jul-Aug;16(7-8):247-53. 3. Med Sci (Paris).

2010 Apr;26(4):411-6.