

# **Oct4 Antibody**

Purified Mouse Monoclonal Antibody Catalog # AO1471a

## **Specification**

# **Oct4 Antibody - Product Information**

Application WB, FC, ICC, E

Primary Accession
Reactivity
Host
Clonality
Isotype
Calculated MW

Monoclonal

**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 FC~~1/200 - 1/400 ICC~~N/A E~~N/A

# **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



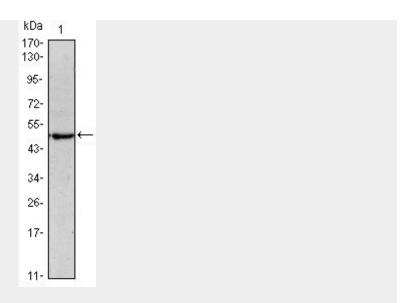


Figure 1: Western blot analysis using Oct4 mouse mAb against NTERA-2 (1) cell lysate.

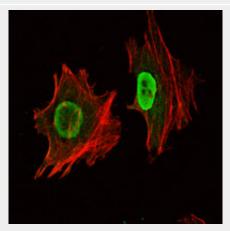


Figure 2: Immunofluorescence analysis of NTERA-2 cells using Oct4 mouse mAb (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

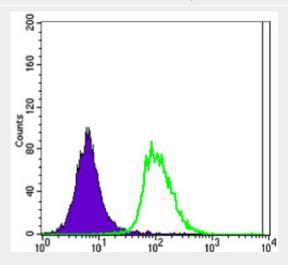
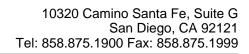


Figure 3: Flow cytometric analysis of Jurkat cells using Oct4 mouse mAb (green) and negative control (purple).

# **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.