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Oct4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1471a

Product Information

Application	WB, FC, ICC, E
Primary Accession	Q01860
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	7E7
Isotype	IgG1
Calculated MW	38571
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.

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.

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.

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.

Images

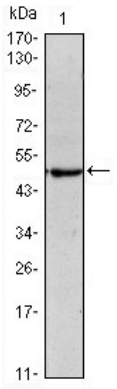


Figure 1: Western blot analysis using Oct4 mouse mAb against NTERA-2 (1) cell lysate.

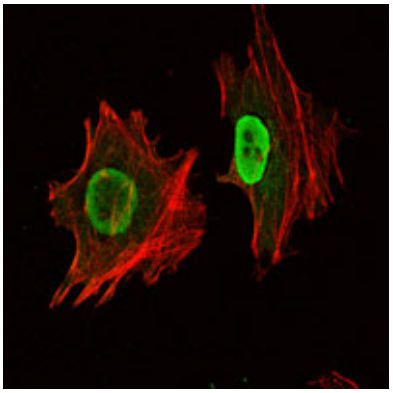
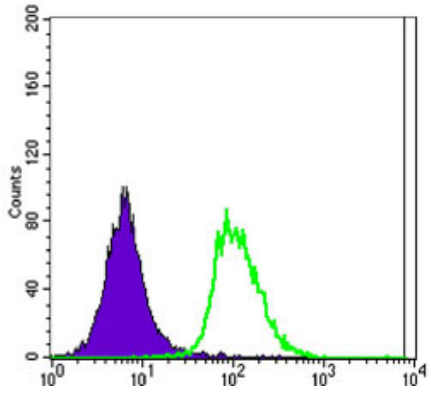


Figure 2: Immunofluorescence analysis of NTERA-2 cells using Oct4 mouse mAb (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

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



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.