

# Oct4 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO1499a

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">Q01860</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	5F7
<b>Isotype</b>	IgG1
<b>Calculated MW</b>	38571
<b>Description</b>	<p>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.</p>
<b>Immunogen</b>	Synthesized peptide of human Oct4.
<b>Formulation</b>	Ascitic fluid containing 0.03% sodium azide.

## Additional Information

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<b>Gene ID</b>	5460
<b>Other Names</b>	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
<b>Dilution</b>	WB~~1/500 - 1/2000 E~~N/A
<b>Storage</b>	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.
<b>Precautions</b>	Oct4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

<b>Name</b>	POU5F1
<b>Synonyms</b>	OCT3, OCT4, OTF3
<b>Function</b>	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.
<b>Cellular Location</b>	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}
<b>Tissue Location</b>	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. J Biol Chem. 2008 Dec 19;283(51):35825-33. 2. Dev Genes Evol. 2008 Oct;218(10):561-6. 3. Stem Cells. 2008 Sep;26(9):2419-24.

## Images

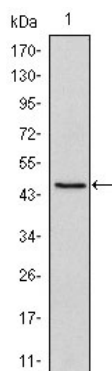


Figure 1: Western blot analysis using Oct4 mouse mAb against NTERA-2 cell lysate (1).

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