

Oct4 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1317a**Specification**

Oct4 Antibody - Product Information

Application	WB, IHC
Primary Accession	O01860
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	39kDa KDa

Description

Members of Oct family of transcription factors specifically interact with Octamer motif ATGCAAAT, a regulatory element important for tissue- and cell-specific transcription as well as for transcription of a number of housekeeping genes. All of the members of the Oct family contain two highly conserved domains which are separated by 14-26 variable amino acids. These include the POU homeodomain and the POU-specific domain. Both are required for DNA binding and are involved in protein-protein interactions. Evidences indicate that regulation of Oct family transcription factors occurs at the level of phosphorylation. Oct4 is renowned as a transcription factor expressed by undifferentiated embryonic stem cells and embryonic germ cells.

Immunogen

Purified recombinant fragment of OCT4 expressed in E. Coli.

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

IHC~~1:200~~1000

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 Cytometry](#)
- [Cell Culture](#)

Oct4 Antibody - Images

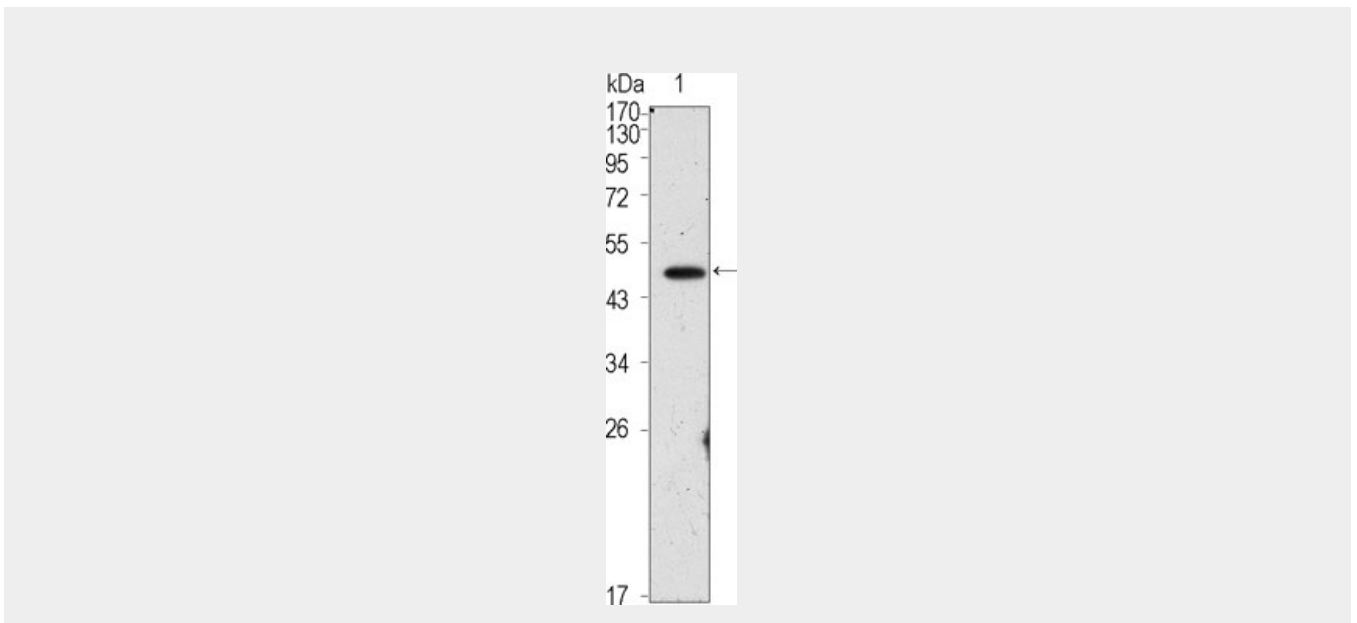


Figure 1: Western blot analysis using OCT4 mouse mAb against PMA treated HepG2 cell lysate (1).

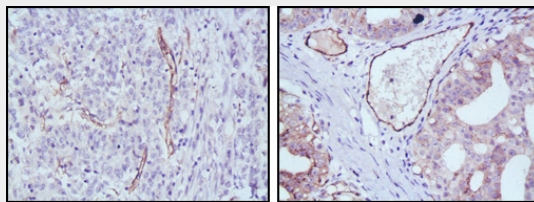


Figure 2: Immunohistochemical analysis of paraffin-embedded human stomach cancer (left) and ovary cancer (right) tissues using eNOS mouse mAb with DAB staining.

Oct4 Antibody - References

1. Stem Cells. 2009 Mar;27(3):543-9.
2. Genome Biol. 2008;9(12):R172.