



Oct-3/4 Monoclonal Antibody

Catalog No	YP-Ab-15740
Isotype	IgG
Reactivity	Human
Applications	WB;FCM;IF
Gene Name	POU5F1
Protein Name	POU domain class 5 transcription factor 1
Immunogen	Purified recombinant human Oct-3/4 protein fragments expressed in E.coli.
Specificity	Oct-3/4 Monoclonal Antibody detects endogenous levels of Oct-3/4 protein.
Formulation	Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.2% sodium azide, 50% glycerol.
Source	Monoclonal, Mouse
Purification	Affinity purification
Dilution	Western Blot: 1/1000 - 1/2000. Flow cytometry: 1/100 - 1/200. Immunofluorescence: 1/100 - 1/500. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	POU5F1; OCT3; OCT4; OTF3; 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
Observed Band	
Cell Pathway	Cytoplasm. Nucleus. Expressed in a diffuse and slightly punctuate pattern. Colocalizes with MAPK8 and MAPK9 in the nucleus. .
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.
Function	function:Transcription factor that binds to the octamer motif (5'-ATTTGCAT-3'). Forms a trimeric complex with SOX2 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.,miscellaneous:Several pseudogenes of POU5F1 have been described on chromosomes 1, 3, 8, 10 and 12. 2 of them, localized in chromosomes 8 and 10, are transcribed in cancer tissues but not in normal ones and may be involved in the regulation of POU5F1 gene activity in carcinogenesis.,online information:Oct-4 entry,PTM:Sumoylation enhances the protein stability, DNA binding and transactivation activity. Sumoylation is required for enhanced YES1 expression.,similarity:Belongs to the POU transcription factor family. Class-5 subfamily.,similarity:Contains 1 homeobox DNA-binding doma



Background

This gene encodes a transcription factor containing a POU homeodomain that plays a key role in embryonic development and stem cell pluripotency. Aberrant expression of this gene in adult tissues is associated with tumorigenesis. This gene can participate in a translocation with the Ewing's sarcoma gene on chromosome 21, which also leads to tumor formation. Alternative splicing, as well as usage of alternative AUG and non-AUG translation initiation codons, results in multiple isoforms. One of the AUG start codons is polymorphic in human populations. Related pseudogenes have been identified on chromosomes 1, 3, 8, 10, and 12. [provided by RefSeq, Oct 2013],

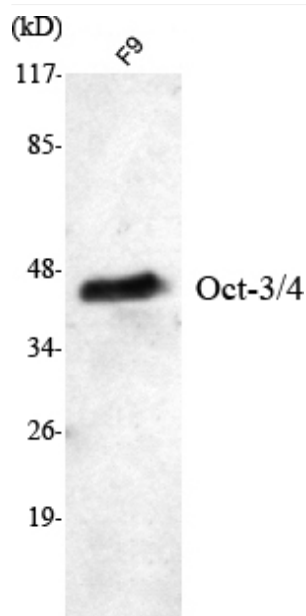
matters needing attention

Avoid repeated freezing and thawing!

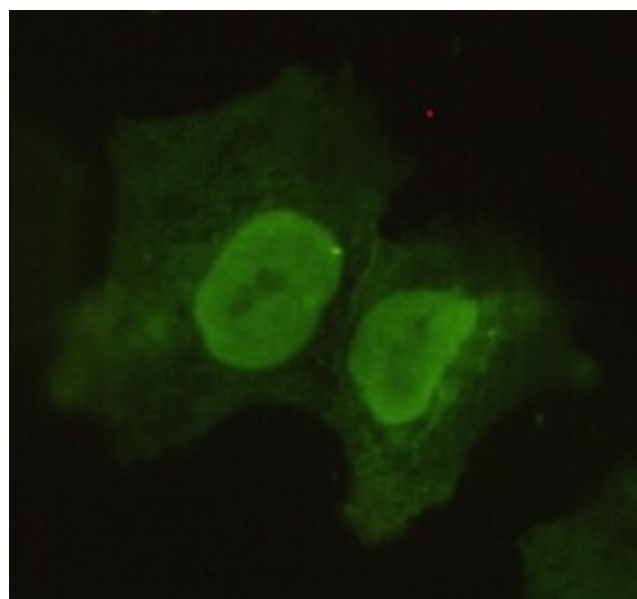
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

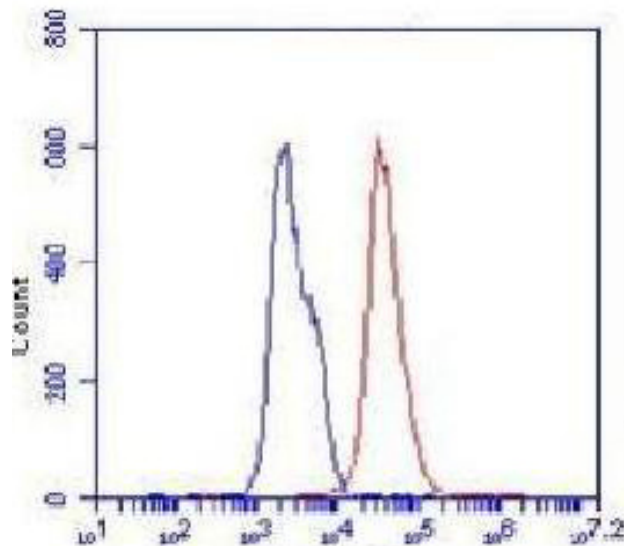
Products Images



Western Blot analysis using Oct-3/4 Monoclonal Antibody against F9 cell lysate.



Immunofluorescence analysis of COS7 cells using Oct-3/4 Monoclonal Antibody.



Flow cytometric analysis of F9 cells stained with Oct-3/4 Monoclonal Antibody (red), followed by FITC-conjugated goat anti-mouse IgG. Blue line histogram represents the isotype control, normal mouse IgG.