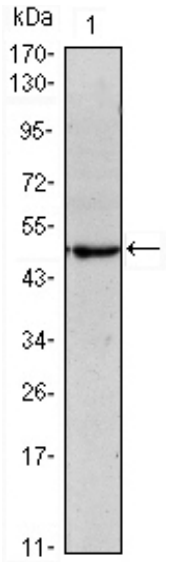
# Oct-3/4 Monoclonal Antibody

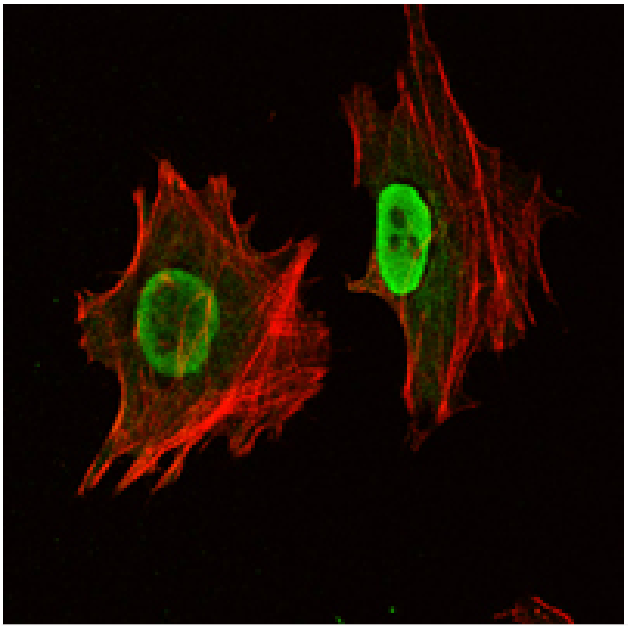
| | |
|---|---|
| **Catalog No** | YP-Ab-15735 |
| **Isotype** | IgG |
| **Reactivity** | Human |
| **Applications** | WB;IF;FCM;ELISA |
| **Gene Name** | POU5F1 |
| **Protein Name** | POU domain class 5 transcription factor 1 |
| **Immunogen** | Synthesized peptide derived from internal of human Oct-3/4. |
| **Specificity** | Oct-3/4 Monoclonal Antibody detects endogenous levels of Oct-3/4 protein. |
| **Formulation** | Ascitic fluid containing 0.03% sodium azide,0.5% BSA, 50%glycerol. |
| **Source** | Monoclonal, Mouse |
| **Purification** | Affinity purification |
| **Dilution** | Western Blot: 1/500 - 1/2000. Immunofluorescence: 1/200 - 1/1000. Flow cytometry: 1/200 - 1/400. ELISA: 1/10000. 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. |

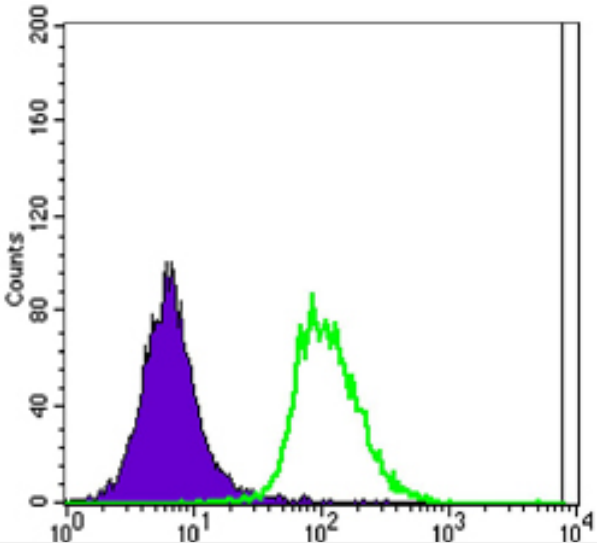
## Products Images




Western Blot analysis using Oct-3/4 Monoclonal Antibody against NTERA-2 (1) cell lysate.



Immunofluorescence analysis of NTERA-2 cells using Oct-3/4 Monoclonal Antibody (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.




Flow cytometric analysis of Jurkat cells using Oct-3/4 Monoclonal Antibody (green) and negative control (purple).