



# POU5F1/OCT4 mouse mAb

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Catalog No         | BYab-31370                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Isotype            | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Reactivity         | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Applications       | WB                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Gene Name          | pou5f1                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Protein Name       |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Immunogen          | Purified recombinant mouse POU5F1/OCT4 protein fragments expressed in E.coli.                                                                                                                                                                                                                                                                                                                                                       |
| Specificity        | This antibody detects endogenous levels of POU5F1/OCT4 and does not cross-react with related proteins.                                                                                                                                                                                                                                                                                                                              |
| Formulation        | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                                                                                                                                                                                                                                                                                             |
| Source             | Monoclonal, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Purification       | The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.                                                                                                                                                                                                                                                                                                                  |
| Dilution           | wb 1:1000                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Concentration      | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Purity             | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Storage Stability  | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Synonyms           | MGC22487;Oct 3;Oct 4;Oct-3;Oct-4;OCT3;Oct4;Octamer binding protein 3;Octamer binding protein 4;Octamer binding transcription factor 3;Octamer-binding protein 3;Octamer-binding protein 4;Octamer-binding transcription factor 3;OTF 3;OTF 4;OTF-3;OTF3;OTF4; PO5F1_HUMAN;POU class 5 homeobox 1;POU domain class 5 transcription factor 1;POU domain transcription factor OCT4;POU domain, class 5, transcription factor 1;POU5F1. |
| Observed Band      | 45kD                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 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                                                                                                                                                                                               |

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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 domain

**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**

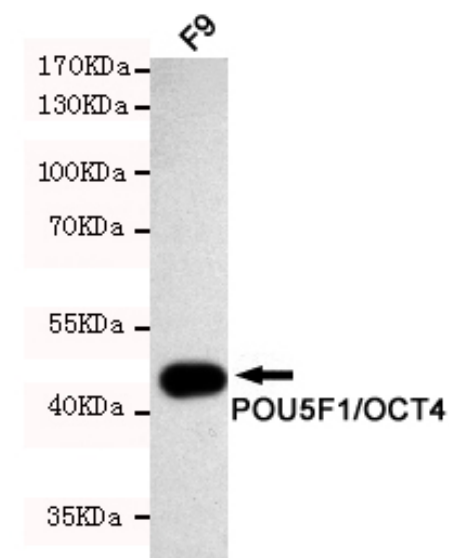
Avoid repeated freezing and thawing!

**Usage suggestions**

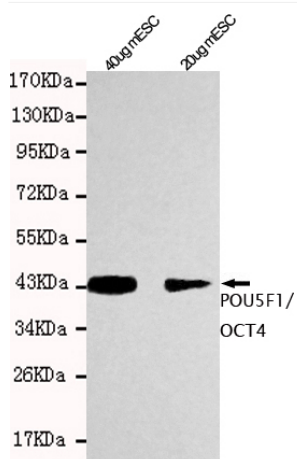
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



## Products Images



Western blot detection of POU5F1/OCT4 in F9 cell lysates using POU5F1/OCT4 mouse mAb (1:1000 diluted). Predicted band size: 45KDa. Observed band size: 45KDa.



Western blot detection of POU5F1/OCT4 in 20ug and 40ug mESC cell lysates using POU5F1/OCT4 mouse mAb (1:1000 diluted). Predicted band size: 45KDa. Observed band size: 45KDa.

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