10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Oct-4 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10425

Specification

Oct-4 Antibody - Product Information

Application	**WB**
Primary Accession	P20263
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**38216**

Oct-4 Antibody - Additional Information

Gene ID 18999

Application & Usage	**Western blotting (0.5-4 µg/ml), immunoprecipitation (20 µg/ml) and Immunohistochemistry (20 µg/ml). However, the optimal conditions should be determined individually. The antibody reacts with 45 kDa Oct-4 (also designated Oct-3A) and in a less extent 33 kDa Oct-3B from human, mouse, and rat samples. Rat kidney tissue lysate can be used as a positive control.**

Other Names
MGC22487, OCT3, OTF3, OTF4, Oct4 , POU5F1 , Oct-3

Target/Specificity
Oct-4

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) affinity purified rabbit anti-Oct-3/4 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Oct-4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Oct-4 Antibody - Protein Information

Name Pou5f1

Synonyms Oct-3, Oct-4, Otf-3, Otf3

Function
Transcription factor that binds to the octamer motif (5'- ATTTGCAT-3') (PubMed:1972777, PubMed:1690859, PubMed:1967980, PubMed:17525163, PubMed:23376973). 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 (PubMed:15863505, PubMed:17097055, PubMed:17496161, PubMed:19740739). Critical for early embryogenesis and for embryonic stem cell pluripotency (PubMed:1972777, PubMed:1690859, PubMed:17496161, PubMed:18662995, PubMed:19740739, PubMed:29153991, PubMed:23376973, PubMed:32703285).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:Q01860}. Nucleus {ECO:0000255|PROSITE-ProRule:PRU00108, ECO:0000255|PROSITE- ProRule:PRU00530, ECO:0000269|PubMed:17496161, ECO:0000269|PubMed:17525163, ECO:0000269|PubMed:29153991} Note=Expressed in a diffuse and slightly punctuate pattern (By similarity). Colocalizes with MAPK8 and MAPK9 in the nucleus (PubMed:29153991). {ECO:0000250|UniProtKB:Q01860, ECO:0000269|PubMed:29153991}

Tissue Location
Expressed the totipotent and pluripotent stem cells of the pregastrulation embryo. Also expressed in primordial germ cells and in the female germ line. Absent from adult tissues

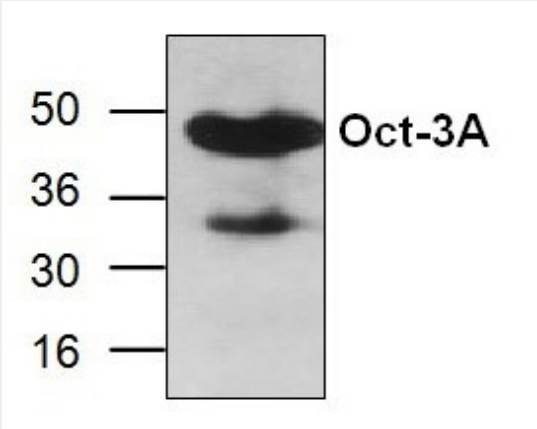
Oct-4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides

- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Oct-4 Antibody - Images



Western blot analysis of Oct-3/4 in rat kidney tissue lysate

Oct-4 Antibody - Background

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.

Oct-4 Antibody - Citations

- Combination of resveratrol-containing collagen with adipose stem cells for craniofacial tissue-engineering applications.