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Goat Anti-OCT4 / POU5F1 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1750a

Specification

Goat Anti-OCT4 / POU5F1 Antibody - Product Information

Application	**WB**
Primary Accession	Q01860
Other Accession	NP_976034, 5460, 18999 (mouse), 294562 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**38571**

Goat Anti-OCT4 / POU5F1 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

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

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
Goat Anti-OCT4 / POU5F1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-OCT4 / POU5F1 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.

Goat Anti-OCT4 / POU5F1 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

Goat Anti-OCT4 / POU5F1 Antibody - Images



AF1750a (2 µg/ml) staining of Human Placenta lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-OCT4 / POU5F1 Antibody - Background

This gene encodes a transcription factor containing a POU homeodomain. This transcription factor plays a role in embryonic development, especially during early embryogenesis, and it is necessary for embryonic stem cell pluripotency. A translocation of this gene with the Ewing's sarcoma gene, t(6;22)(p21;q12), has been linked to tumor formation. Alternative splicing, as well as usage of alternative translation initiation codons, results in multiple isoforms, one of which initiates at a

non-AUG (CUG) start codon. Related pseudogenes have been identified on chromosomes 1, 3, 8, 10, and 12.

Goat Anti-OCT4 / POU5F1 Antibody - References

Examination of genetic polymorphisms in newborns for signatures of sex-specific prenatal selection. Ucisik-Akkaya E, et al. Mol Hum Reprod, 2010 Oct. PMID 20587610.
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A data integration approach to mapping OCT4 gene regulatory networks operative in embryonic stem cells and embryonal carcinoma cells. Jung M, et al. PLoS One, 2010 May 21. PMID 20505756.
Expression profile of the embryonic markers nanog, OCT-4, SSEA-1, SSEA-4, and frizzled-9 receptor in human periodontal ligament mesenchymal stem cells. Trubiani O, et al. J Cell Physiol, 2010 Oct. PMID 20458727.
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