

**Goat Anti-OCT4 / POU5F1 Antibody**  
Peptide-affinity purified goat antibody  
Catalog # AF1750a

### Specification

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#### Goat Anti-OCT4 / POU5F1 Antibody - Product Information

Application	WB
Primary Accession	<a href="#">Q01860</a>
Other Accession	<a href="#">NP_976034</a> , <a href="#">5460</a> , <a href="#">18999 (mouse)</a> , <a href="#">294562 (rat)</a>
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

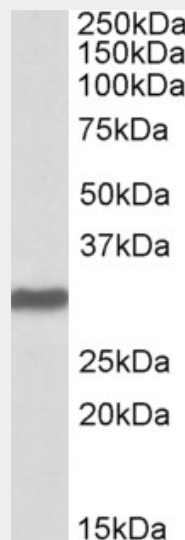
Expressed in developing brain. Highest levels found in specific cell layers of the cortex, the olfactory bulb, the hippocampus and the cerebellum. Low levels of expression in adult tissues.

### 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 Cytometry](#)
- [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.

A novel SALL4/OCT4 transcriptional feedback network for pluripotency of embryonic stem cells. Yang J, et al. PLoS One, 2010 May 21. PMID 20505821.

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.

[The dual role of OCT4] Stefanovic S, et al. Med Sci (Paris), 2010 Apr. PMID 20412747.