



Rabbit Anti-Oct-3/Oct-4 antibody

SL1111R

Product Name:	Oct-3/Oct-4
Chinese Name:	胚胎Stem cells关键蛋白抗体
Alias:	POU domain, class 5, transcription factor 1;Oct-3/4; Oct-4A; Oct4A; Oct 4A; Octamer-binding transcription factor 3; Octamer-4; Octamer-3; Oct-3; NF-A3; Otf-3; Otf3; MGC22487; 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; 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 type homeodomain containing DNA binding protein; POU5F1; POU5F1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	39kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human OCT-4:201-300/360
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed

Product Detail:

Expression of the POU-domain transcription factor Octamer-4 (Oct-4) is widely regarded as a hallmark of pluripotent stem cells. The relationship of Oct-4 to pluripotent stem cells is indicated by its tightly restricted expression to undifferentiated pluripotent stem cells. Upon differentiation to somatic lineages, the expression of Oct-4 disappears rapidly. Unlike the majority of pluripotent stem cell markers, the biological role of Oct-4 has been well characterized. Studies performed in mice point to the critical role of Oct-4 in the establishment and/or maintenance of pluripotent stem cells in an uncommitted state.

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.

Subunit:

Interacts with UBE2I and ZSCAN10. Interacts with PKM2. Interacts with WWP2.

Subcellular Location:

Cytoplasm. Nucleus. Note=Expressed in a diffuse and slightly punctuate pattern.

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.

Post-translational modifications:

Sumoylation enhances the protein stability, DNA binding and transactivation activity. Sumoylation is required for enhanced YES1 expression.

Ubiquitinated; undergoes 'Lys-63'-linked polyubiquitination by WWP2 leading to proteasomal degradation.

ERK1/2-mediated phosphorylation at Ser-111 promotes nuclear exclusion and proteasomal degradation. Phosphorylation at Thr-235 and Ser-236 decrease DNA-binding and alters ability to activate transcription.

Similarity:

Belongs to the POU transcription factor family. Class-5 subfamily.

Contains 1 homeobox DNA-binding domain.

Contains 1 POU-specific domain.

SWISS:

P20263

Gene ID:

5460

Database links:

[Entrez Gene: 5460](#) Human

[Entrez Gene: 282316](#) Cow

[Entrez Gene: 18999](#) Mouse

[Entrez Gene: 100127461](#) Pig

[Entrez Gene: 294562](#) Rat

[Omim: 164177](#) Human

[SwissProt: O97552](#) Cow

[SwissProt: Q01860](#) Human

[SwissProt: P20263](#) Mouse

[SwissProt: Q9TSV5](#) Pig

[Unigene: 249184](#) Human

[Unigene: 632482](#) Human

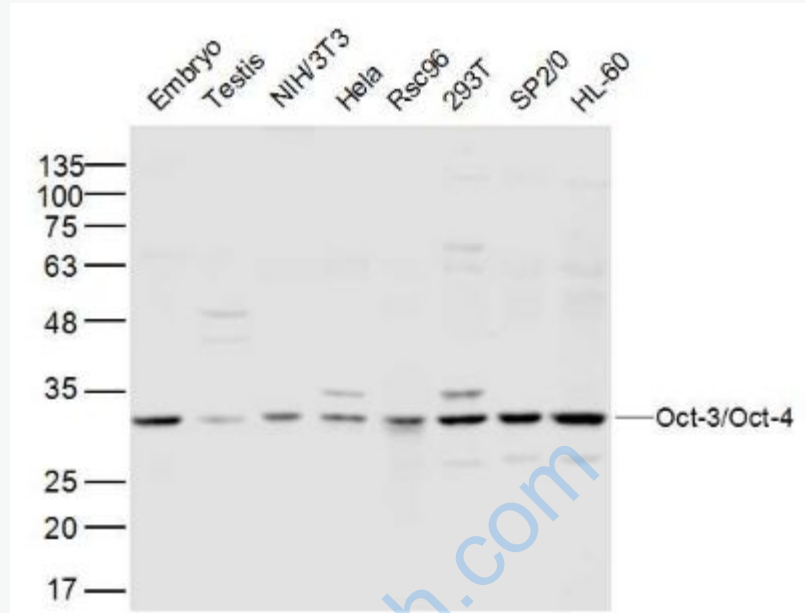
[Unigene: 646545](#) Human

[Unigene: 17031](#) Mouse

[Unigene: 161748](#) Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Sample:

Embryo (Mouse) Lysate at 40 ug

Testis Cell Lysate at 40 ug

NIH/3T3 (Mouse) Lysate at 40 ug

HeLa(Mouse) Lysate at 40 ug

Rsc96 Cell(Rat) Lysate at 40 ug

293T Cell(Human)Lysate at 40 ug

SP2/0 Cell(Mouse) Lysate at 40 ug

HL60 Cell(Human)Lysate at 40 ug

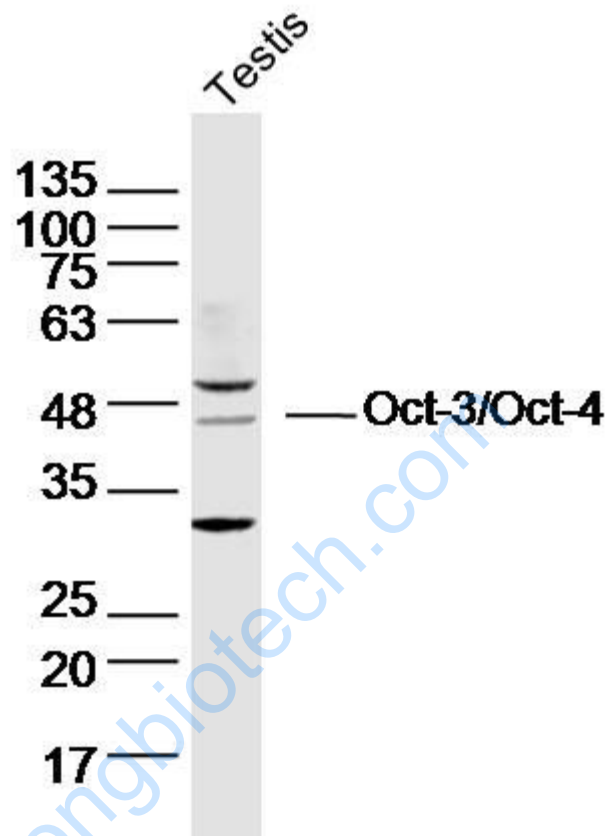
Primary: Anti- Oct-3/Oct-4 (SL1111R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 30,39 kD

Observed band size: 30,39kD

Picture:



Sample:

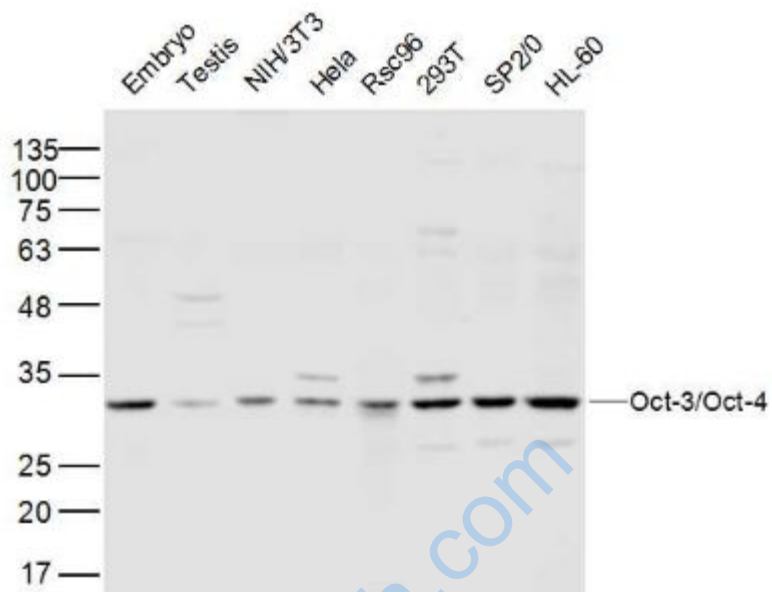
Testis Cell Lysate at 40 ug

Primary: Anti- Oct-3/Oct-4 (SL1111R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 30,39 kD

Observed band size: 30,39kD



Sample:

Embryo (Mouse) Lysate at 40 ug

Testis (Mouse) Lysate at 40 ug

NIH/3T3 (Mouse) Cell Lysate at 40 ug

HeLa (Human) Cell Lysate at 40 ug

Rsc96 (Rat) Cell Lysate at 40 ug

293T (Human) Cell Lysate at 40 ug

SP2/0 (Mouse) Cell Lysate at 40 ug

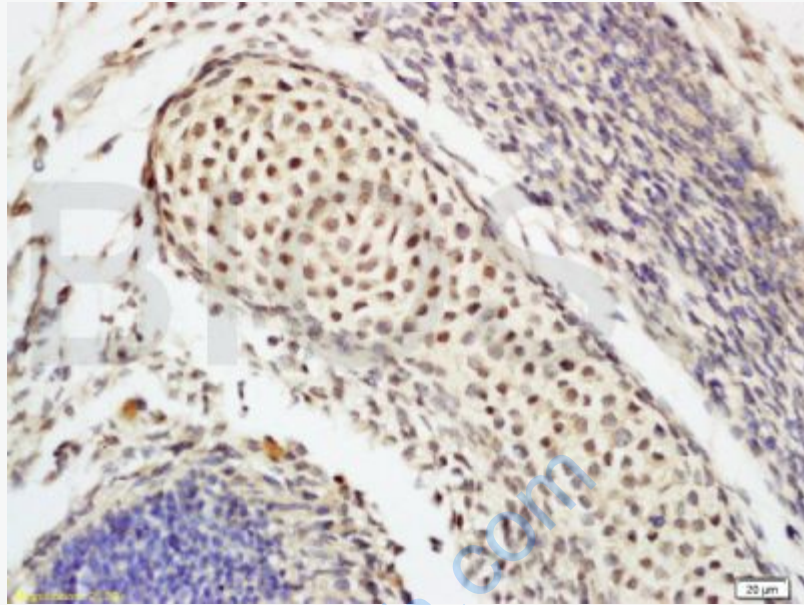
HL-60 (Human) Cell Lysate at 40 ug

Primary: Anti-Oct-3/Oct-4 (SL1111R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 39 kD

Observed band size: 39 kD



Tissue/cell: mouse tooth germ tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-Oct-3/Oct-4 Polyclonal Antibody, Unconjugated(SL1111R) 1:100, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining