


## Product datasheet

# Anti-Oct4 antibody ab137427

[14 References](#) [7 Images](#)

### Overview

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<b>Product name</b>	Anti-Oct4 antibody
<b>Description</b>	Rabbit polyclonal to Oct4
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, Flow Cyt, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human <b>Predicted to work with:</b> Rabbit, Cow, Cat, Pig, Monkey 
<b>Immunogen</b>	Recombinant fragment corresponding to Human Oct4 aa 1-182.
<b>Positive control</b>	Recombinant human Oct4 protein ( <a href="#">ab134876</a> ) can be used as a positive control in WB. HeLa, Human embryonic stem cells (ESC) and Mouse ESC whole cell lysates; HeLa nuclear cell lysate; Human embryonic stem cells.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 78.99% PBS, 1% BSA, 20% Glycerol (glycerin, glycerine)
<b>Purity</b>	Protein A purified
<b>Purification notes</b>	Affinity Purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

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**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab137427 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000 - 1/10000. Predicted molecular weight: 38 kDa.
Flow Cyt		1/50 - 1/200. <b>ab171870</b> - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF		1/100 - 1/1000.

## Target

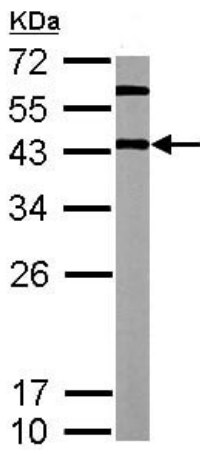
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<b>Function</b>	Transcription factor that binds to the octamer motif (5'-ATTTGCAT-3'). Forms a trimeric complex with SOX2 on DNA and controls the expression of a number of genes involved in embryonic development such as YES1, FGF4, UTF1 and ZFP206. Critical for early embryogenesis and for embryonic stem cell pluripotency.
<b>Tissue specificity</b>	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.
<b>Sequence similarities</b>	Belongs to the POU transcription factor family. Class-5 subfamily. Contains 1 homeobox DNA-binding domain. Contains 1 POU-specific domain.
<b>Developmental stage</b>	Highly expressed in undifferentiated embryonic stem cells and expression decreases gradually after embryoid body (EB) formation.
<b>Domain</b>	The POU-specific domain mediates interaction with PKM2.
<b>Post-translational modifications</b>	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.
<b>Cellular localization</b>	Nucleus. Expressed in a diffuse and slightly punctuate pattern.

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## Images

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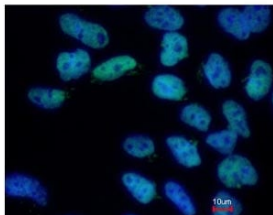
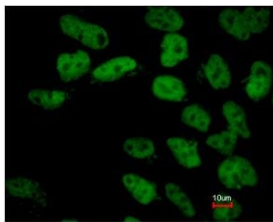


Western blot - Anti-Oct4 antibody (ab137427)

Anti-Oct4 antibody (ab137427) at 1/5000 dilution + Mouse Embryonic Stem Cell whole cell lysate at 20  $\mu$ g

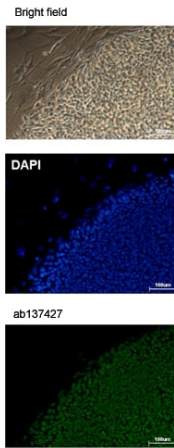
**Predicted band size:** 38 kDa

12% SDS PAGE



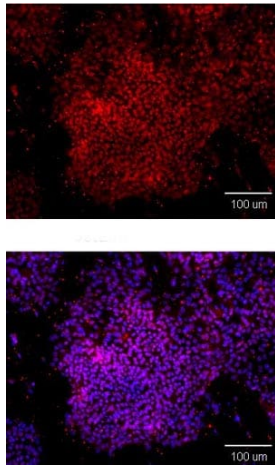
Immunocytochemistry/ Immunofluorescence - Anti-Oct4 antibody (ab137427)

Immunofluorescent analysis of paraformaldehyde-fixed Human Embryonic Stem cells labelling Oct4 with ab137427 at 1:400 dilution. Lower image shows cells co-stained with Hoechst 33342.



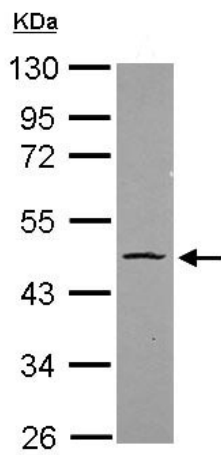
Immunocytochemistry/ Immunofluorescence - Anti-Oct4 antibody (ab137427)

Immunofluorescent analysis of paraformaldehyde-fixed Human embryonic stem cells labelling Oct4 with ab137427 at 1:200 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Oct4 antibody (ab137427)

Immunofluorescent analysis of paraformaldehyde-fixed Human embryonic stem cells labelling Oct4 with ab137427 at 1:100 dilution. Lower image shows cells co-stained with DAPI.

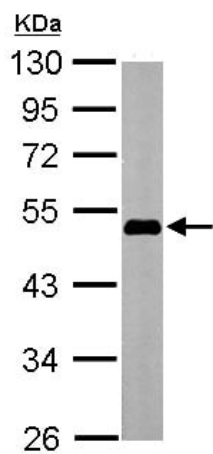


Western blot - Anti-Oct4 antibody (ab137427)

Anti-Oct4 antibody (ab137427) at 1/1000 dilution + HeLa nuclear cell lysate at 20  $\mu$ g

**Predicted band size:** 38 kDa

10% SDS PAGE

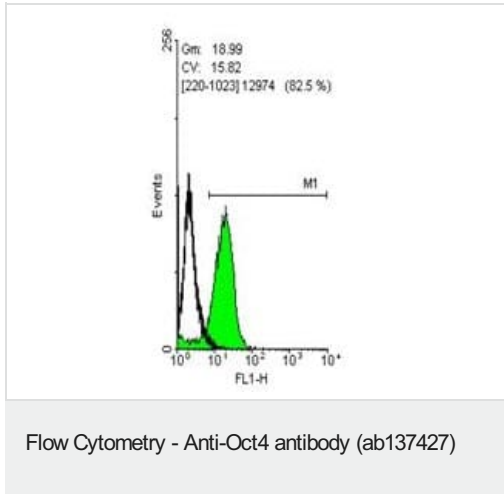


Western blot - Anti-Oct4 antibody (ab137427)

Anti-Oct4 antibody (ab137427) at 1/1000 dilution + Human Embryonic Stem Cell whole cell lysate at 20  $\mu$ g

**Predicted band size:** 38 kDa

10% SDS PAGE



Flow cytometric analysis of Human Embryonic Stem cells labelling Oct4 with ab137427 at 1:50 dilution (green) or rabbit IgG (black).

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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