abcam

# ab281842

# Anti-Oct6 antibody [EPR24057-94] - BSA and Azide free

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR24057-94 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.978 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |

| | |
|---|---|
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## IP

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Human, Rat |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Mouse, Rat, Human |
| **Dilution info** | - |
| **Notes** | - |

## IHC-Fr

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | - |
| **Notes** | Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20) |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20) |

### Expected

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Mouse, Rat, Human |
| **Dilution info** | - |
| **Notes** | - |

# Target data

See full target information POU3F1

**Function** Transcription factor that binds to the octamer motif (5'-ATTTGCAT-3') (By similarity). Acts as a transcriptional activator when binding cooperatively with SOX4, SOX11, or SOX12 to gene promoters (By similarity). Acts as a transcriptional repressor of myelin-specific genes (By similarity).

# Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |

## Notes

ab281842 is the carrier-free version of ab259952.

**Patented technology**
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

**Conjugation ready**
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | Oct6 also known as Pou3f1 is a transcription factor with a molecular mass of approximately 45 kDa. It functions as a DNA-binding protein that influences gene expression during development. Oct6 belongs to the POU domain transcription factor family which plays a significant role in regulating specific genes across different cellular contexts. This protein is expressed mainly in the nervous system specifically in oligodendrocytes Schwann cells and some sensory organs reflecting its involvement in neural development. |

| | |
|---|---|
| **Biological function summary** | Oct6 regulates important developmental processes by controlling the timing and progression of myelination in the peripheral nervous system. It is a part of a multi-protein complex that includes other transcription factors necessary for glial cell differentiation. Oct6 acts by promoting the expression of genes essential for the development and function of the myelin sheath thereby maintaining proper nerve conduction and insulation. |
| **Pathways** | Oct6 interacts within the myelination process specifically the Sonic Hedgehog signaling and WNT pathways. These pathways govern the regulation of cell growth and differentiation important for neural development. Oct6 also shows interaction with other proteins like Sox10 a fellow transcription factor important for Schwann cell development enhancing its regulatory influence in neurogenesis. |
| **Associated diseases and disorders** | Oct6 links to conditions such as Charcot-Marie-Tooth disease and Dejerine-Sottas syndrome both affecting peripheral nerves. These disorders often result from malfunction in myelination processes which Oct6 directly influences. The protein collaborates with Sox10 and EGR2 another transcription factor vital in myelination thereby implicating it in neuropathic disease mechanisms. Understanding these interactions may help develop therapeutic strategies for demyelinating diseases. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

## 11 product images

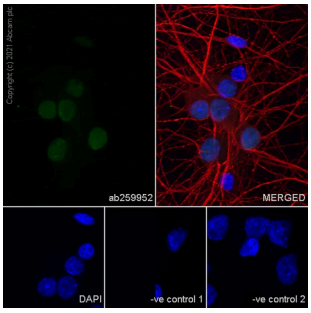



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Oct6 antibody [EPR24057-94] - BSA and Azide free (ab281842)

This data was developed using ab259952, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human skin tissue labelling Oct6 with ab259952 at 1/2000 (0.261 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on epithelial cells of human skin. The section was incubated with ab259952 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

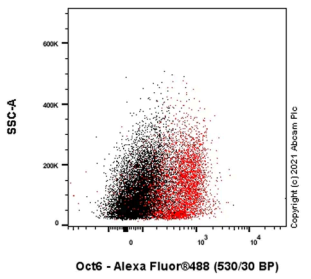



## Immunocytochemistry/ Immunofluorescence - Anti-Oct6 antibody [EPR24057-94] - BSA and Azide free (ab281842)

Oct6 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Oct6 antibody

This data was developed using ab259952, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized rat primary neuron cells labelling Oct6 with ab259952 at 1/50 (10.44 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green) Confocal image showing nuclear staining in rat primary neuron. Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection is observed. ab11267 Anti-MAP2 mouse monoclonal antibody was used to counterstain tubulin at 1/500 dilution (Red). The Nuclear counterstain was DAPI (Blue).

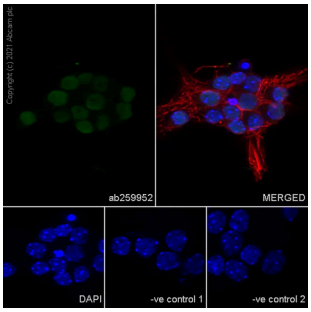
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.




## Flow Cytometry (Intracellular) - Anti-Oct6 antibody [EPR24057-94] - BSA and Azide free (ab281842)

Oct6 Flow Cytometry (Intracellular) staining using rabbit Anti-Oct6 antibody

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Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Mouse primary neuron cells cells labelling Oct6 with ab259952 at 1/50 dilution (1ug)/(Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

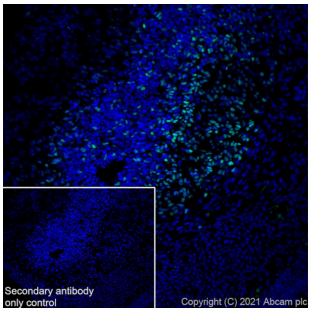



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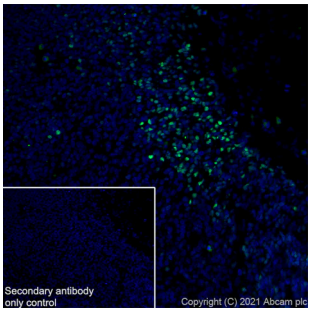

## Immunohistochemistry (Frozen sections) - Anti-Oct6 antibody [EPR24057-94] - BSA and Azide free (ab281842)

Oct6 Immunohistochemistry (Frozen sections) staining using rabbit Anti-Oct6 antibody

This data was developed using ab259952, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse E14.5 embryonic tissue labeling Oct6 with ab259952 at 1/100 (5.22 ug/ml) dilution followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (Green). Nuclear staining on mouse E14.5 embryonic brain is observed. The nuclear counterstain was DAPI (Blue).

Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488)at 1/1000 dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).



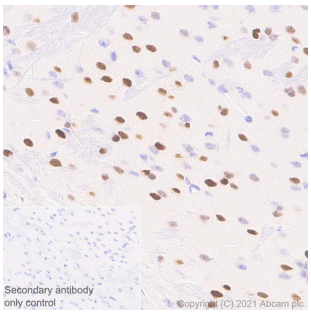

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## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Oct6 antibody [EPR24057-94] - BSA and Azide free (ab281842)

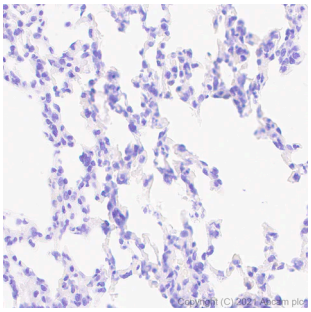
Oct6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Oct6 antibody

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Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labelling Oct6 with ab259952 at 1/2000 (0.261 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on mouse cerebrum. The section was incubated with ab259952 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

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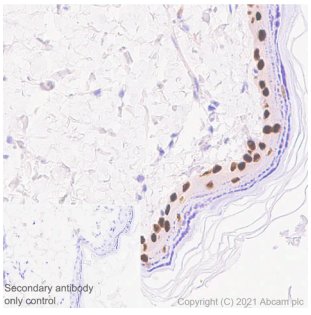
Oct6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Oct6 antibody

This data was developed using ab259952, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Rat lung tissue labelling Oct6 with ab259952 at 1/2000 (0.261 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). **Negative control**: No staining in rat lung. The section was incubated with ab259952 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

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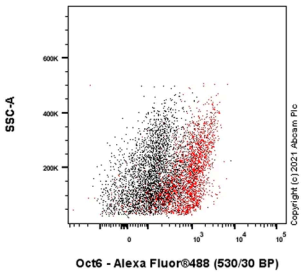
Oct6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Oct6 antibody

This data was developed using ab259952, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Rat skin tissue labelling Oct6 with ab259952 at 1/2000 (0.261 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Nuclear staining on epithelial cells of rat skin. The section was incubated with

ab259952 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

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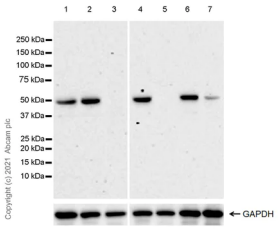
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## Flow Cytometry (Intracellular) - Anti-Oct6 antibody [EPR24057-94] - BSA and Azide free (ab281842)

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## Western blot - Anti-Oct6 antibody [EPR24057-94] - BSA and Azide free (ab281842)

Oct6 Western blot staining using rabbit Anti-Oct6 antibody

This data was developed using ab259952, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Negative control: lung (PMID: 1979677).

Exposure time: 3 minutes

All lanes:
Western blot - Anti-Oct6 antibody [EPR24057-94] (ab259952) at 1/1000 dilution

Lane 1:
Rat P0 brain tissue lysate at 20 µg

Lane 2:
Rat P7 hippocampus tissue lysate at 20 µg

Lane 3:
Rat lung tissue lysate at 20 µg

Lane 4:
Mouse P1 brain tissue lysate at 20 µg

Lane 5:
Mouse lung tissue lysate at 20 µg

Lane 6:
F9 (mouse embryonal carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 7:
NCCIT (human pluripotent embryonic carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 45 kDa

Observed band size: 48 kDa

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.