abcam

# ab205482

# Alexa Fluor® 647 Anti-Oct-2 antibody [EPR12482]

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Conjugation** | Alexa Fluor® 647 |
| **Excitation/Emission** | Ex: 650nm, Em: 665nm |
| **Storage buffer** | pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR12482 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.5 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## ICC/IF

**Tested**

| | |
|---|---|
| **Species** | Human |

| | |
|---|---|
| **Dilution info** | 1/100 |
| **Notes** | This product gave a positive signal in Raji cells fixed with 4% formaldehyde (10 min) |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Flow Cyt (Intra)

### Expected

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

## Target data

See full target information POU2F2

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|---|---|
| **Function** | Transcription factor that specifically binds to the octamer motif (5'-ATTTGCAT-3') (PubMed:2904654, PubMed:7859290). Regulates IL6 expression in B cells with POU2AF1 (By similarity). Regulates transcription in a number of tissues in addition to activating immunoglobulin gene expression (PubMed:2901913, PubMed:2904654). Modulates transcription transactivation by NR3C1, AR and PGR (PubMed:10480874). Isoform 5. Activates the U2 small nuclear RNA (snRNA) promoter. |

## Storage

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|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |

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| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle, Store in the dark |

## Notes

**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.

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## Supplementary info

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

| | |
|---|---|
| **Activity summary** | Oct-2 also known as 9A2 or POU2F2 is a transcription factor with a molecular mass of approximately 50-55 kDa. It belongs to the POU family of transcription factors. Oct-2 is expressed widely in various tissues but shows higher expression levels in B lymphocytes and the central nervous system. This protein binds to the octamer DNA sequence motif which regulates the activity of several genes involved in immune function and neural development. Its expression pattern and DNA binding properties make Oct-2 essential in controlling transcriptional activation and repression. |
| **Biological function summary** | Oct-2 regulates the expression of target genes by binding to octamer motifs within promoters and enhancers. In the immune system Oct-2 plays a significant role in B cell differentiation and maturation. It acts as an essential transcriptional regulator |

| | |
|---|---|
| | of immunoglobulin gene expression. In neural tissues Oct-2 influences genes involved in neural differentiation and development. Oct-2 often does not act alone; it forms part of multi-protein complexes interacting with coactivators and corepressors to modulate gene expression tightly. |
| **Pathways** | Oct-2 participates in critical transcriptional regulatory networks. It is important in the immune response pathway controlling genes involved in B cell activation and antibody production. Oct-2 also interacts with Oct-1 another member of the POU family in controlling gene expression patterns related to adaptive immunity. Additionally Oct-2 influences pathways involved in neural development working alongside transcription factors like Pax-5 to regulate genes critical for the growth and differentiation of neuronal cells. |
| **Associated diseases and disorders** | Oct-2 has been implicated in certain B cell-related malignancies and neurological disorders. Abnormal expression or mutation of Oct-2 can contribute to the development of lymphoma by altering the normal regulation of proliferation-related genes in B cells. Oct-2 also has connections to neurodevelopmental disorders where dysregulation of neural-specific genes controlled by Oct-2 may contribute to disease pathology. Understanding Oct-2's interaction with related proteins such as EBF1 in these disorders provides insights into the complex genetic regulation involved in these conditions. |

## 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.

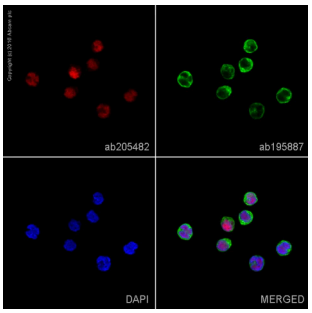
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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

## 1 product image




### Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-Oct-2 antibody [EPR12482] (ab205482)

Oct-2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Oct-2 antibody

ab205482 staining Oct-2 in Raji cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab205482 at 1/100 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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