abcam

ab92458

Anti-Oct-2 antibody [EPR542]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR542
Purification technique	Affinity purification Protein A
Concentration	0.733 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/5000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Target data

See full target information POU2F2

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

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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.

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

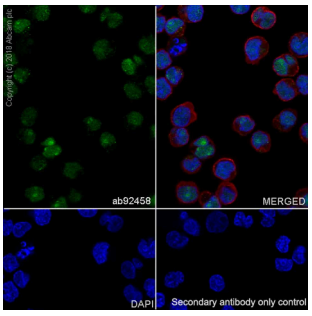
We do not recommend this combination. It is not covered by our product promise.

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.

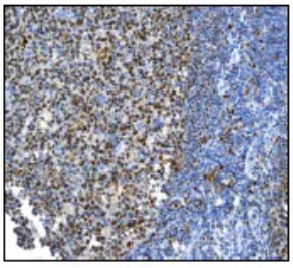
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-Oct-2 antibody [EPR542] (ab92458)

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

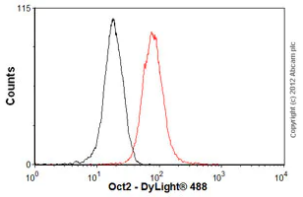
Immunocytochemistry analysis of Raji (human Burkitt's lymphoma B lymphocyte) labeling 37530 with purified ab92458 at 1/500 dilution. Cells were fixed with 4% Paraformaldehyde and permeabilised with 0.1% tritonX-100. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/1000 (2 µg/ml) was used as the secondary antibody. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.19 µg/ml) was used as counterstain. Nuclei were stained blue with DAPI.
Negative control: PBS instead of the primary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Oct-2 antibody [EPR542] (ab92458)

Oct-2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Oct-2 antibody

ab92458 at a 1:250 dilution staining Oct-2 in human tonsil (paraffin embedded section) by immunohistochemistry.
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



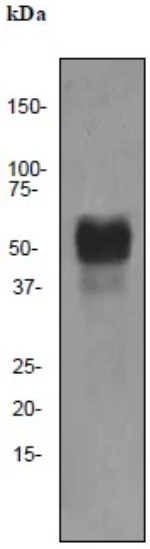
Flow Cytometry (Intracellular) - Anti-Oct-2 antibody [EPR542] (ab92458)

Oct-2 Flow Cytometry (Intracellular) staining using rabbit Anti-Oct-2 antibody

Overlay histogram showing Raji (Human Burkitt's lymphoma cell line) cells stained with ab92458 (red line).
The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab92458, 1/50) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C.

Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions.

Acquisition of >5,000 events was performed.



Western blot - Anti-Oct-2 antibody [EPR542] (ab92458)

All lanes:
Western blot - Anti-Oct-2 antibody [EPR542] (ab92458) at 1/1000 dilution

All lanes:
Daudi (Human Burkitt's lymphoma cell line) lysate at 10 µg

Secondary

All lanes:
HRP conjugated goat anti-rabbit antibody at 1/2000 dilution

Predicted band size: 51 kDa

Observed band size: 58 kDa

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