abcam

ab239913

Anti-Oct-2 antibody [EPR542] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR542
Purification technique	Affinity purification Protein A
Concentration	1.091 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Human
Dilution info	-
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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab239913 is the carrier-free version of ab92458.

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.

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	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.

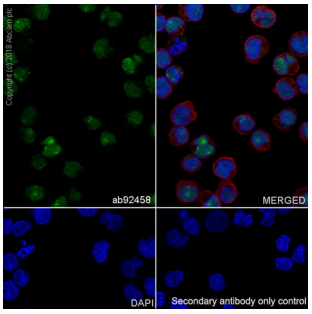
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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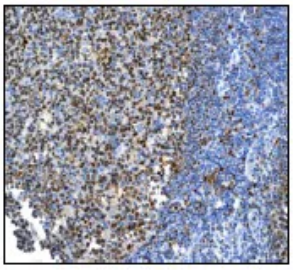
3 product images



Immunocytochemistry/ Immunofluorescence - Anti-Oct-2 antibody [EPR542] - BSA and Azide free (ab239913)

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

This data was developed using the same antibody clone in a different buffer formulation (ab92458).
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.

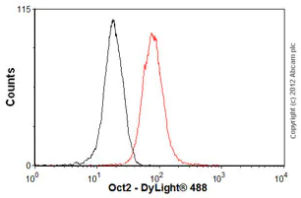


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Oct-2 antibody [EPR542] - BSA and Azide free (ab239913)

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

ab92458, at 1:250 staining Oct-2 in Human tonsil paraffin embeeded section by immunohistochemistry.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92458).

Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Oct-2 antibody [EPR542] - BSA and Azide free (ab239913)

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

Overlay histogram showing Raji 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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92458).

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