abcam

ab179808

Anti-Oct-2 antibody [EPR12482]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR12482
Purification technique	Affinity purification Protein A
Specificity	The Oct-2 targeted by ab179808 is POU domain, class 2, transcription factor 2 (SwissProt ID: P09086).
Concentration	0.583 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30

Notes	**For unpurified use at 1/10 - 1/100.**

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/5000
Notes	**For unpurified use at 1/1000 - 1/5000.**

Species	Rat
Dilution info	1/5000
Notes	**For unpurified use at 1/1000 - 1/5000.**

Species	Human
Dilution info	1/5000
Notes	**For unpurified use at 1/1000 - 1/5000.**

ICC/IF

Tested

Species	Human
Dilution info	1/200
Notes	**For unpurified use at 1/100 - 1/250.**

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.

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. For unpurified use at 1/100 - 1/500.

Expected

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

ChIP

Not recommended

Species	Human, Mouse, Rat
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	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

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

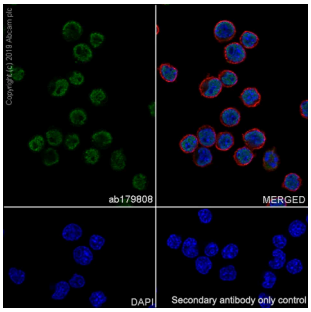
We do not recommend this combination. It is not covered by our product promise.

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.

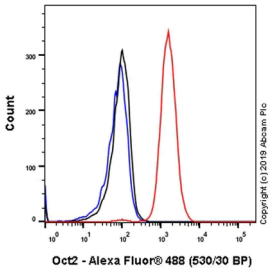
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-Oct-2 antibody [EPR12482] (ab179808)

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

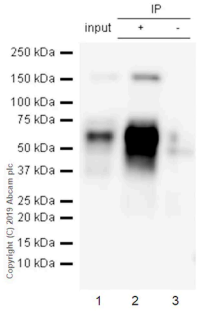
Immunocytochemistry/ Immunofluorescence analysis of Ramos (Human Burkitt's lymphoma B lymphocyte) cells labeling Oct-2 with purified ab179808 at 1/200 (2.7 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-Oct-2 antibody [EPR12482] (ab179808)

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

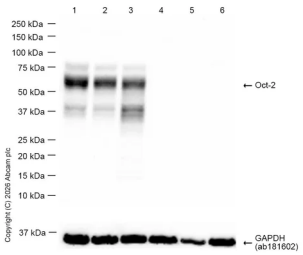
Intracellular Flow Cytometry analysis of Raji (Human Burkitt's lymphoma B lymphocyte) cells labeling Oct-2 with purified ab179808 at 1/50 dilution (10µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunoprecipitation - Anti-Oct-2 antibody [EPR12482] (ab179808)

Purified ab179808 at 1/30 dilution (2ug) immunoprecipitating Oct-2 in Raji whole cell lysate.
Lane 1 (input): Raji (Human Burkitt's lymphoma B lymphocyte) whole cell lysate (10µg)
Lane 2 (+): ab179808 + Raji whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab179808 in Raji whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/1000) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 58 kDa
All lanes:
Immunoprecipitation - Anti-Oct-2 antibody [EPR12482] (ab179808)

Predicted band size: 51 kDa



Western blot - Anti-Oct-2 antibody [EPR12482] (ab179808)

Oct-2 Western blot staining using rabbit Anti-Oct-2 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/1000,000 dilution.

Negative samples: HeLa, A549, SW480 (PMID:20473321).

All lanes:
Western blot - Anti-Oct-2 antibody [EPR12482] (ab179808) at 1/1000 dilution

Lane 1:
Raji (human Burkitt's lymphoma B lymphocyte) whole cell lysate at 20 µg

Lane 2:
Ramos (human Burkitt's lymphoma B lymphocyte) whole cell lysate at 20 µg

Lane 3:
Daudi (human Burkitt's lymphoma lymphoblast) whole cell lysate at 20 µg

Lane 4:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 5:
A549 (human lung carcinoma epithelial cell) whole cell lysate at 20 µg

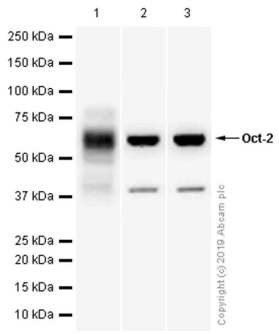
Lane 6:
SW480 (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 65 kDa, 36 kDa

Exposure time: 10s



Western blot - Anti-Oct-2 antibody [EPR12482] (ab179808)

Blocking/Diluting buffer: 5% NFDM/TBST
The observed bands are consistent with what are described in PMID: 26993806.

All lanes:
Western blot - Anti-Oct-2 antibody [EPR12482] (ab179808) at 1/5000 dilution

Lane 1:
Raji (Human Burkitt's lymphoma B lymphocyte) whole cell lysate at 20 µg

Lane 2:
Mouse brain lysate at 20 µg

Lane 3:
Rat brain lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 51 kDa

Observed band size: 65 kDa

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