abcam

ab51363

Anti-Oct-1 antibody [POU5I097]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.05% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human POU2F1. The exact immunogen used to generate this antibody is proprietary information. Database link P14859
Clone number	POU5I097
Purification technique	Affinity purification Protein G
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Filtered through a 0.22 µm membrane.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	1/50
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/10
Notes	-

Target data

See full target information POU2F1

Function	Transcription factor that binds to the octamer motif (5'-ATTTGCAT-3') and activates the promoters of the genes for some small nuclear RNAs (snRNA) and of genes such as those for histone H2B and immunoglobulins. Modulates transcription transactivation by NR3C1, AR and PGR. (Microbial infection) In case of human herpes simplex virus (HSV) infection, POU2F1 forms a multiprotein-DNA complex with the viral transactivator protein VP16 and HCFC1 thereby enabling the transcription of the viral immediate early genes.

Storage

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
Aliquoting information	Upon delivery aliquot

Storage information	Avoid freeze / thaw cycle

Supplementary info

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

Activity summary	Oct-1 also known as POU domain class 2 transcription factor 1 (POU2F1) is a transcription factor characterized by its POU-specific domain. The molecular weight of Oct-1 is approximately 76 kDa. It is expressed widely across different tissues with high levels found in lymphoid organs and epithelial cells. It binds to octamer motifs in the promoters of target genes regulating their transcription. Oct-1 plays a role in the cell cycle development and immune response.
Biological function summary	Oct-1 participates in the regulation of gene expression by influencing RNA polymerase II. It is not part of a larger protein complex for its primary function but it does interact with other cofactors. Oct-1 is essential for maintaining the expression of housekeeping genes as well as for the induction of specific genes during external stimuli responses. By modulating cellular responses Oct-1 helps in the regulation of cells' growth differentiation and adaptation to stress.
Pathways	Oct-1 is involved in pathways related to stress responses and immune system function. It significantly influences the transcriptional activation of genes associated with the stress response pathway. Oct-1 associates with proteins like c-Myc and others within these pathways which contribute to the regulation of cell proliferation and apoptosis. Its role in these pathways highlights its involvement in cellular homeostasis and survival.
Associated diseases and disorders	Oct-1's dysregulation connects to the pathogenesis of various conditions including cancer and autoimmune diseases. Changes in Oct-1 activity have been observed in several cancers affecting tumorigenesis and progression. It interacts with proteins like Bcl-2 in the context of cancer impacting cell survival mechanisms. In autoimmune diseases such as lupus altered Oct-1 function can lead to inappropriate immune responses partly through interaction with transcription factors like NF-κB. Understanding the role of Oct-1 can help in developing targeted therapeutic strategies for these disorders.

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.

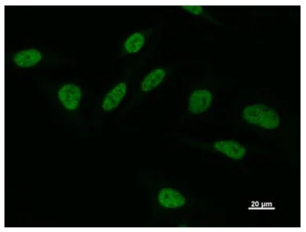
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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

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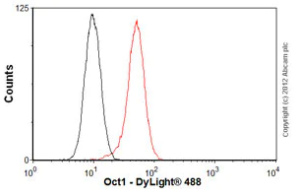
3 product images



Immunocytochemistry/ Immunofluorescence - Anti-Oct-1 antibody [POU5I097] (ab51363)

Oct-1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Oct-1 antibody

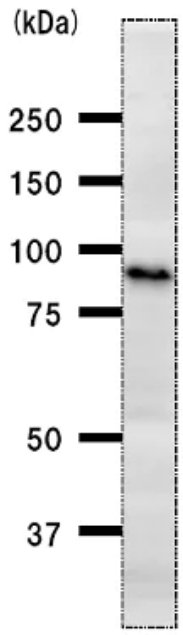
ab51363 at 1:10 dilution staining HeLa cells; visualised with AlexaFluor®488 Goat Anti-mouse IgG at 1:200 dilution.



Flow Cytometry - Anti-Oct-1 antibody [POU5I097] (ab51363)

Oct-1 Flow Cytometry staining using mouse Anti-Oct-1 antibody

Overlay histogram showing Jurkat cells stained with ab51363 (red line). The cells were fixed with 4% paraformaldehyde (10 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 (ab51363, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1:500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Jurkat cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Western blot - Anti-Oct-1 antibody [POU5I097] (ab51363)

All lanes:
Western blot - Anti-Oct-1 antibody [POU5I097] (ab51363) at 1/50 dilution

All lanes:
HEK293 whole cell lysate at 50 µg

Secondary

All lanes:
Anti mouse IgG antibody at 1/2500 dilution

Predicted band size: 76 kDa

Observed band size: 89 kDa

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