abcam

ab196155

Alexa Fluor® 488 Anti-Nanog antibody [EPR2027(2)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
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	EPR2027(2)
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Flow Cyt (Intra)

Expected

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

IHC-P

Expected

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

Target data

See full target information NANOG

Function Transcription regulator involved in inner cell mass and embryonic stem (ES) cells proliferation and self-renewal. Imposes pluripotency on ES cells and prevents their differentiation towards extraembryonic endoderm and trophectoderm lineages. Blocks bone morphogenetic protein-induced mesoderm differentiation of ES cells by physically interacting with SMAD1 and interfering with the recruitment of coactivators to the active SMAD transcriptional complexes. Acts as a transcriptional activator or repressor. Binds optimally to the DNA consensus sequence 5'-TAAT[GT][GT]-3' or 5'-[CG][GA][CG]C[GC]ATTAN[GC]-3'. Binds to the POU5F1/OCT4 promoter (PubMed:25825768). Able to autorepress its expression in differentiating (ES) cells: binds to its own promoter following interaction with ZNF281/ZFP281, leading to recruitment of the NuRD complex and subsequent repression of expression. When overexpressed, promotes cells to enter into S phase and proliferation.

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, 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	Nanog also known as Nanog homeobox is a transcription factor playing an important role in maintaining the pluripotency of embryonic stem cells. The molecular weight of Nanog is approximately 35 kDa. It is found mainly in the inner

	cell mass of the blastocyst but it also expresses in embryonic stem cells and some adult stem cell populations. Nanog acts by binding to DNA in a sequence-specific manner to regulate gene expression essential for stem cell self-renewal and pluripotency.
Biological function summary	Nanog plays a central role in stem cell biology operating as part of a complex regulatory network. Nanog interacts with other important transcription factors like Oct4 and Sox2 forming a core pluripotency network. This network suppresses the differentiation of stem cells by regulating the expression of genes involved in cell fate decisions. By modulating the expression of different pathways Nanog ensures the maintenance of an undifferentiated state in stem cells.
Pathways	Nanog is deeply embedded in the Wnt/β-Catenin and TGF-β signaling pathways important for stem cell maintenance and differentiation. In the Wnt/β-Catenin pathway Nanog works alongside proteins like β-catenin to drive the expression of genes that promote self-renewal. Meanwhile in the TGF-β pathway Nanog acts with proteins such as Smad2/3 to balance pluripotency and differentiation signals. These pathways critically support the complex network that sustains stem cell identity and function.
Associated diseases and disorders	Nanog's expression relates closely to its role in various cancers such as glioblastoma and colorectal cancer. Abnormally high levels of Nanog contribute to the tumorigenicity of cancer cells by maintaining their self-renewal and undifferentiated state similar to its role in stem cells. Nanog interacts with proteins like p53 known for its tumor suppressor functions often leading to challenges in cancer treatment. Understanding Nanog's influence in these pathways provides valuable insights into therapeutic targets for combating cancer stem cell resilience.

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

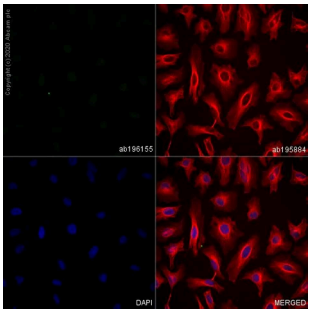
We do not recommend this combination. It is not covered by our product promise.

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.

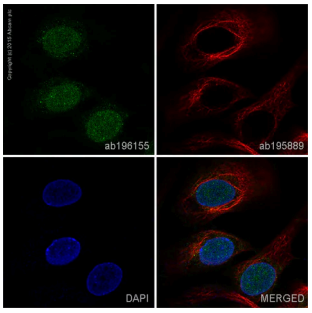
3 product images



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-Nanog antibody [EPR2027(2)] (ab196155)

Nanog Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Nanog antibody

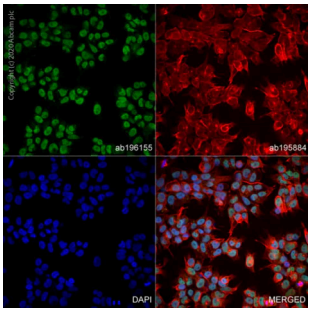
ab196155 staining Nanog in HeLa cells (negative). The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 10% normal goat serum in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab196155 at 1/100 dilution (shown in green) and ab195884, Rat monoclonal to alpha Tubulin (Alexa Fluor® 647), at 1/200 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal high content analyser (Perkin Elmer, Operetta-CLS).



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-Nanog antibody [EPR2027(2)] (ab196155)

Nanog Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Nanog antibody

ab196155 staining Nanog in Sk-ov-3 cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 10% normal goat serum in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab196155 at 1/50 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at 1/200 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-Nanog antibody [EPR2027(2)] (ab196155)

Nanog Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Nanog antibody

ab196155 staining Nanog in NCCIT cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 10% normal goat serum in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab196155 at 1/100 dilution (shown in green) and ab195884, Rat monoclonal to alpha Tubulin (Alexa Fluor® 647), at 1/200 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal high content analyser (Perkin Elmer, Operetta-CLS).

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