abcam

ab16286

Anti-SSEA3 antibody [MC631]

20ul selling size

Key facts

Isotype	IgM
Host species	Rat
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	MC631
Purity	Tissue culture supernatant
Purification notes	Tissue culture supernatant was cross flow concentrated.

Reactivity data

IHC-FoFr

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	ab35768 - Rat monoclonal IgM, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information SSEA3

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

Notes

The monoclonal antibody that defines SSEA-3 was derived by fusing cells of the murine myeloma cell line SP2/0 with the spleen cells of a Fisher rat immunized with 4-8-cell-stage zonapellucida-free embryos from randomly bred mice.
Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

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

Activity summary	SSEA3 also known as Stage-Specific Embryonic Antigen-3 is a glycosphingolipid with a molecular mass not specifically defined due to its lipid nature. This antigen is expressed on the surface of pluripotent stem cells particularly human embryonic stem cells and some germ cells. SSEA3 belongs to the globoseries of glycolipids and is widely used as a marker for undifferentiated cells. The expression of SSEA3 decreases as these cells undergo differentiation which makes it useful in studying stem cell biology and early development processes.
Biological function summary	SSEA3 plays a role in cell adhesion and signaling during early embryogenesis. It does not form a complex itself but exists in the cell membrane contributing to interactions with other molecules or possibly engaging in signaling processes essential for cell proliferation and maintenance of stemness. The role of SSEA3 as a marker in detecting undifferentiated cells uncovers its importance in maintaining specific cell states.
Pathways	SSEA3 may influence cellular pathways that govern stem cell maintenance and differentiation. Though not directly a pathway component it associates with proteins involved in pluripotency regulation like the Wnt and Notch pathways which are important for determining cell fate and growth. These pathways involve

	connections to proteins such as beta-catenin in the Wnt pathway which can influence stemness and cellular development.
Associated diseases and disorders	Alterations in SSEA3 expression have been related to certain cancers and stem cell-related diseases. SSEA3 is sometimes found in higher levels in cancers that exhibit stem cell-like characteristics such as certain teratocarcinomas. It connects to proteins implicated in oncogenesis through shared expression patterns in tumors and stem cells like the Oct4 protein which is known for its role in maintaining stem cell properties and is often reactivated in cancer cells.

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

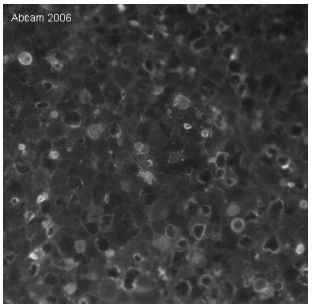
We do not recommend this combination. It is not covered by our product promise.

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.

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Terms & Conditions.

3 product images

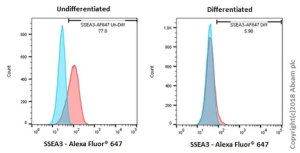


Immunocytochemistry/ Immunofluorescence - Anti-SSEA3 antibody [MC631] (ab16286)

SSEA3 Immunocytochemistry/ Immunofluorescence staining using rat Anti-SSEA3 antibody

The image shows cell membrane staining of 2102Ep human embryonic carcinoma cells using SSEA3 specific antibody ab16286.

This image is courtesy of the laboratory of Peter Andrews.

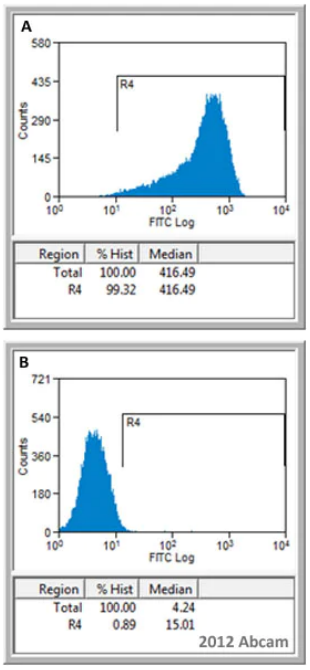


This image is courtesy of Prof Chris Denning's lab, University of Nottingham

Flow Cytometry - Anti-SSEA3 antibody [MC631] (ab16286)

SSEA3 Flow Cytometry staining using rat Anti-SSEA3 antibody

Human induced pluripotent stem cells (iPSCs) stained with ab16286 (red fill). In brief, iPSCs were fixed in 4% formaldehyde (methanol-free) for 15 min at 25°C. Cells were then incubated with the antibody (ab16286, 1/50 dilution) for 30 min at 4°C. The secondary antibody used was Alexa Fluor® 647 goat anti-rat IgG at 1/2000 dilution for 30 min at 4°C. iPSCs differentiated for 28 days toward a cardiomyocyte lineage (blue fill) were used as a negative control. Acquisition of >30,000 total events were collected using a 100mW solid state diode laser (640nm) and 670/30 bandpass filter.



This image is from an anonymous collaborator.

Flow Cytometry - Anti-SSEA3 antibody [MC631] (ab16286)

SSEA3 Flow Cytometry staining using rat Anti-SSEA3 antibody

Anti-SSEA3 antibody, ab16286 can be used as a marker of Embryonic Carcinoma cells in Flow Cytometry/FACS. The top histogram (A) shows undifferentiated NTERA2 cells (i.e. without retinoic acid) recognised by ab16286. However, upon differentiation (by the addition of retinoic acid 10^{-5}M for 7 days), the antibody lost the ability to recognise these cells as shown in the bottom histogram (B).

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