abcam

ab16287

Anti-SSEA4 antibody [MC813-70]

Anti-SSEA4 antibody [MC813-70] (ab16287) is a mouse monoclonal antibody detecting SSEA4 in **Flow Cytometry, ICC/IF**. Suitable for **Human**.

- Over 180 publications
- Trusted since 2006

20ul selling size

Key facts

Isotype	IgG3
Host species	Mouse
Storage buffer	Preservative: 0.02% Sodium azide
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	MC813-70
Purity	Tissue culture supernatant
Light chain type	kappa
Purification notes	Tissue culture supernatant was cross flow concentrated.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	ab18392 - Mouse monoclonal IgG3, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information SSEA4

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

What is this antibody validated in?
Anti-SSEA4 antibody [MC813-70] (ab16287) is a mouse monoclonal antibody and is validated for use in Flow Cytometry (Flow Cyt), Immunocytochemistry/immunofluorescence (ICC/IF) in Human samples.

Trusted by the scientific community
Anti-SSEA4 [MC813-70] (ab16287) was first used in a scientific publication in 2006 and has been cited over 180 times in peer-reviewed journals.

Reviewed by scientists
Anti-SSEA4 [MC813-70] (ab16287) has over 10 independent reviews from customers.

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

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

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

Activity summary	SSEA4 known as Stage-Specific Embryonic Antigen-4 is a glycolipid antigen involved in various cellular processes. It has a molecular mass of approximately 868.6 Da. SSEA4 is mainly expressed on the surface of pluripotent stem cells including embryonic stem cells and induced pluripotent stem cells. Additionally it can be found in germ cells and certain cancer cells serving as an important marker for these cell types.
Biological function summary	SSEA4 plays a critical role in the identity and maintenance of pluripotency in stem cells. As a component of the glycosphingolipid complex it is involved in cell signaling pathways that regulate cell differentiation and self-renewal. The presence of SSEA4 on cell surfaces helps in identifying pluripotent stem cells facilitating research and applications in regenerative medicine.
Pathways	SSEA4 influences several key cellular processes related to pluripotency and differentiation. It integrates prominently in the Wnt signaling pathway and the PI3K/Akt pathway which are essential for maintaining stem cell pluripotency and

promoting survival. Interactions with proteins such as B-catenin in the Wnt pathway help modulate transcription factors critical for pluripotency.

Associated diseases and disorders

SSEA4 expression associates with certain cancers particularly in germ cell tumors and some neuroblastomas. In cancer research it interacts with other surface antigens such as CD133 influencing tumor-initiating cell populations. The presence of SSEA4 in these cells can indicate aggressive tumor phenotypes and potential targets for therapeutic intervention.

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.

7 product images

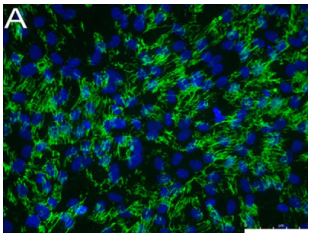
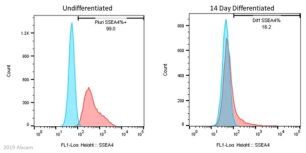


Image from Ferro F et al., PLoS One. 2012;7(7):e41774. Epub 2012 Jul 23. Fig 6.;

Immunocytochemistry/ Immunofluorescence - Anti-SSEA4 antibody [MC813-70] (ab16287)

Immunofluorescence analysis of Human dental pulp stem cells, staining SSEA4 with ab16287 at 1/40 dilution. A FITC-conjugated anti-mouse IgG was used as the secondary antibody.

doi:10.1371/journal.pone.
0041774; July 23, 2012,
PLoS ONE 7(7): e41774.

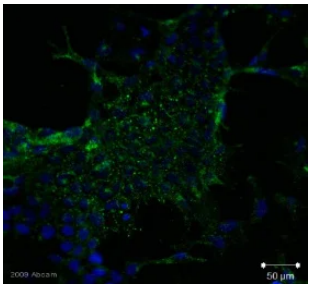


This image is courtesy of Professor Chris Denning's lab, University of Nottingham

Flow Cytometry - Anti-SSEA4 antibody [MC813-70] (ab16287)

SSEA4 Flow Cytometry staining using mouse Anti-SSEA4 antibody

Human induced pluripotent stem cells (iPSCs) stained with ab16287 (red fill) with secondary only control (blue fill). In brief, iPSCs were fixed in 4% formaldehyde (methanol-free) for 15 min at 25°C. Cells were then incubated with the antibody (ab16287, 1/9600 dilution) for 30 min at 4°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG at 1/1000 dilution for 30 min at 4°C. iPSCs differentiated for 14 days toward a cardiomyocyte lineage were used as a negative control. Acquisition of >20,000 total events were collected using a 100mW solid state diode laser (488nm) and 529/28 bandpass filter.

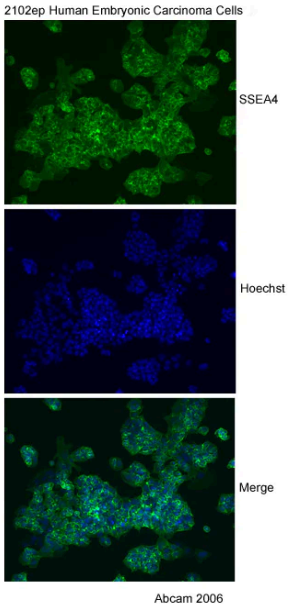


This image is a courtesy of Fiona Lewis

Immunocytochemistry/ Immunofluorescence - Anti-SSEA4 antibody [MC813-70] (ab16287)

SSEA4 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-SSEA4 antibody

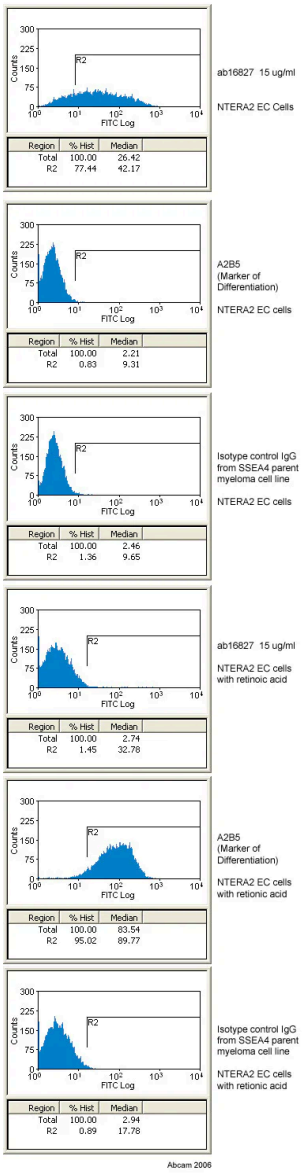
ab16287 staining SSEA4 in human Embryonic Stem Cells, HUES7 by Immunocytochemistry/ Immunofluorescence. Cells were fixed with paraformaldehyde, permeabilized with Triton and blocking with 10% serum for 1 hour was performed. Samples were incubated with primary antibody (1/100: in 1% serum, 0.1% Triton in PBS) for 1 hour at 37°C. An Alexa Fluor® 588-conjugated goat polyclonal to mouse IgG was used at dilution at 1/100 as secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-SSEA4 antibody [MC813-70] (ab16287)

SSEA4 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-SSEA4 antibody

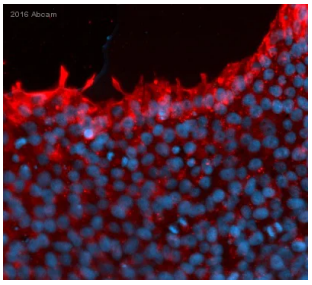
2102ep Human Embryonic Carcinoma cells were stained with SSEA4 antibody ab16287. As expected, staining localised to the cell surface (green). Nuclei are stained blue using Hoechst.



Flow Cytometry - Anti-SSEA4 antibody [MC813-70] (ab16287)

SSEA4 Flow Cytometry staining using mouse Anti-SSEA4 antibody

anti-SSEA4 antibody, ab16297 can be used as a marker of Embryonic Carcinoma cells in Flow Cytometry/FACS. As can be seen from the histograms, in non-differentiating conditions (i.e. without retinoic acid) NTERA2 cells were recognised by ab16297. However, upon differentiation (addition of retinoic acid), the antibody lost the ability to recognise the cells.

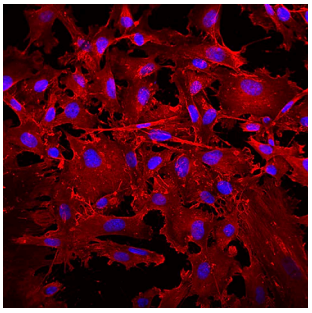


This image is courtesy of a customer review submitted by Vladimir Milenkovic, University Hospital Regensburg, Germany

Immunocytochemistry/ Immunofluorescence - Anti-SSEA4 antibody [MC813-70] (ab16287)

SSEA4 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-SSEA4 antibody

Immunocytochemistry/ Immunofluorescence analysis of human iPSC cells labeling SSEA4 with ab16287 at 1/500 dilution. Cells were fixed with paraformaldehyde and permeabilized with 0.5% TX100. Cells were blocked with 5% serum for 20 minutes at 25°C. A goat polyclonal anti-mouse Cy3 secondary antibody at 1/500 dilution was used.



This image is courtesy of a customer review submitted by Sun Jeong Kim

Immunocytochemistry/ Immunofluorescence - Anti-SSEA4 antibody [MC813-70] (ab16287)

ab16287 staining SSEA4 in rat tendon derived stem cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.25% Triton X-100 in PBS and blocked with 1% BSA for 30 minutes at room temperature. Samples were incubated with primary antibody (1/100) for 20 hours at 4°C. An Alexa Fluor® 594-conjugated donkey anti-mouse IgG polyclonal (1/1000) was used as the secondary antibody.

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