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Product datasheet

Anti-SSEA4 antibody [MC813-70] ab16287

11 Abreviews 165 References 7 Images

Overview

Product name	Anti-SSEA4 antibody [MC813-70]
Description	Mouse monoclonal [MC813-70] to SSEA4
Host species	Mouse
Tested applications	**Suitable for:** ICC/IF, Flow Cyt
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Tissue, cells or virus corresponding to Human SSEA4. Human embryonal carcinoma cell line 2102Ep
General notes	This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium azide
Purity	Tissue culture supernatant
Purification notes	Tissue culture supernatant was cross flow concentrated.
Clonality	Monoclonal
Clone number	MC813-70
Myeloma	Sp2/0

Isotype	IgG3
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab16287 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

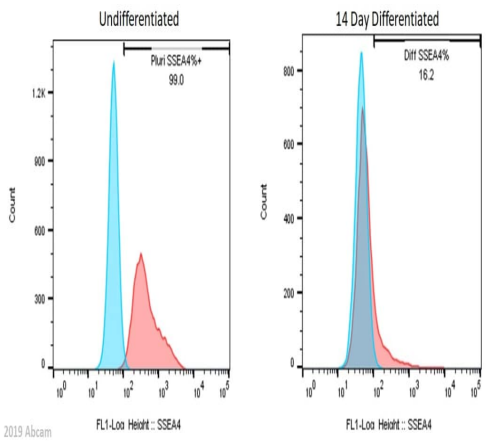
Application	Abreviews	Notes
ICC/IF	★★★★☆ (8)	Use at an assay dependent concentration.
Flow Cyt	★☆☆☆☆ (2)	Use at an assay dependent concentration. **ab18392** - Mouse monoclonal IgG3, is suitable for use as an isotype control with this antibody.

Target

Relevance Glycosphingolipids function as mediators of cell adhesion and are modulators of signal transduction. SSEA-4 (Stage-Specific Embryonic Antigen 4) is a glycolipid expressed early in embryonic development and in pluripotent stem cells. This antibody was first described and named as part of a series of embryonic antigens, defined by monoclonal antibodies isolated in the lab of Prof. Davor Solter (Kannagi, R. et al., 1983, EMBO J. 2:2355). SSEA-4 can be used as a marker of human embryonic stem cells, human embryonic carcinoma cells and human embryonic germ cells. Monoclonal antibodies to this target have been widely used in the characterization of pluripotent stem cells. Mouse pluripotent stem cells are not recognised by anti-SSEA-4 antibodies but do express the antigen upon differentiation.

Cellular localization Cell Membrane

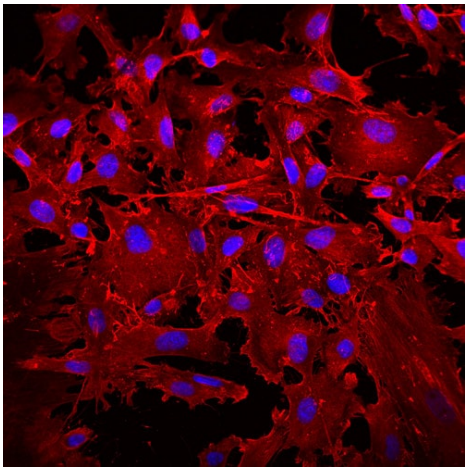
Images



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

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

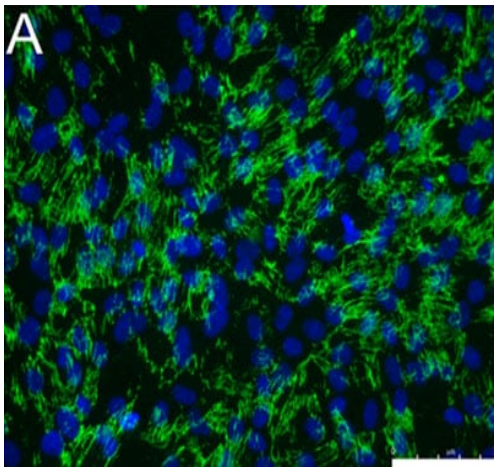
Human induced pluripotent stem cells (iPSCs) stained with ab16287 (red fill) with secondary only control (blue fill). In brief, iPSCs were fixed in 4% formaldehyde (methanol-free) for 15 min at 25°C. Cells were then incubated with the antibody (ab16287, 1/9600 dilution) for 30 min at 4°C. The secondary 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.



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

This image is courtesy of an Abreview submitted by Sun Jeong Kim

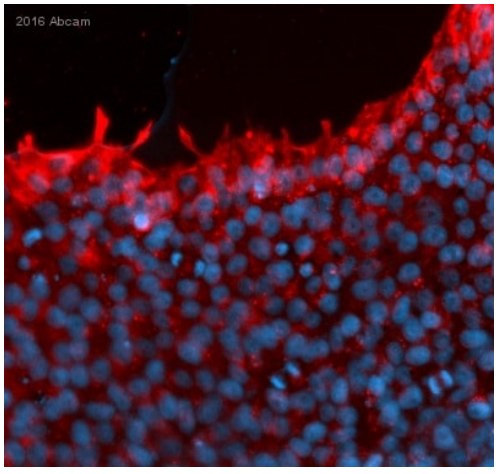
ab16287 staining SSEA4 in rat tendon derived stem cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.25% Triton X-100 in PBS and blocked with 1% BSA for 30 minutes at room temperature. Samples were incubated with primary antibody (1/100)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



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

Image from Ferro F et al., PLoS One. 2012;7(7):e41774. Epub 2012 Jul 23. Fig 6.; doi:10.1371/journal.pone.0041774; July 23, 2012, PLoS ONE 7(7): e41774.

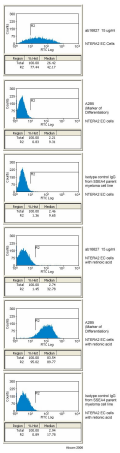
Immunofluorescence analysis of Human dental pulp stem cells, staining SSEA4 with ab16287 at 1/40 dilution. A FITC-conjugated anti-mouse IgG was used as the secondary antibody.



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

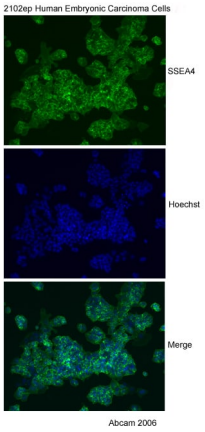
This image is courtesy of an abreview submitted by Vladimir Milenkovic, University Hospital Regensburg, Germany

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.



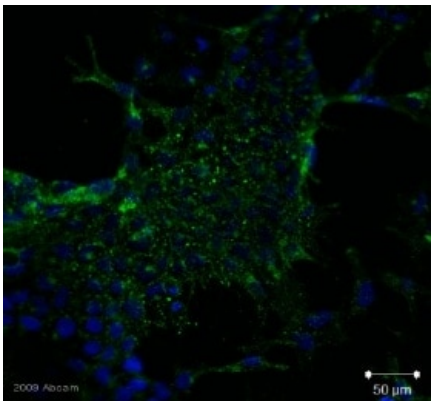
Flow Cytometry - Anti-SSEA4 antibody [MC813-70] (ab16287)

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.



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

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.



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

This image is a courtesy of Fiona Lewis

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.

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