

Product Datasheet

SSEA-3 Antibody (MC-631) - BSA Free NB100-1832

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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NB100-1832

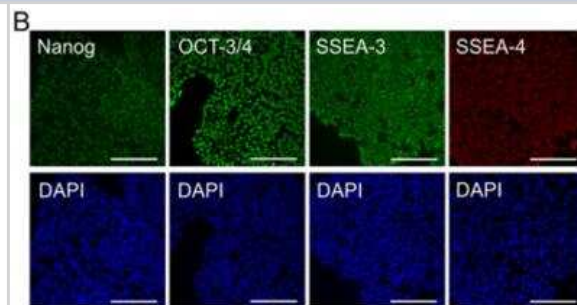
SSEA-3 Antibody (MC-631) - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	MC-631
Preservative	0.02% Sodium Azide
Isotype	IgM
Purity	IgM purified
Buffer	PBS
Product Description	
Description	Novus Biologicals Rat SSEA-3 Antibody (MC-631) - BSA Free (NB100-1832) is a monoclonal antibody validated for use in IHC, WB, Flow, ICC/IF and IP. Anti-SSEA-3 Antibody: Cited in 8 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rat
Species	Human, Mouse
Reactivity Notes	This antibody recognizes the SSEA-3 that is expressed upon the surface of human teratocarcinoma stem cells (EC), human embryonic germ cells (EG) and human embryonic stem cells (ES). No immunoreactivity is evident with undifferentiated murine EC, ES and EG cells. Expression of SSEA-3 is down regulated following differentiation of human EC cells. In contrast, the differentiation of murine EC and ES cells may be accompanied by an increase in SSEA-3 expression.
Marker	Embryonic Stem Cell Marker
Specificity/Sensitivity	Recognizes a carbohydrate epitope of SSEA-3
Immunogen	4-8 cell stage mouse embryos.
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation, CyTOF-ready
Recommended Dilutions	Western Blot 1:500, Flow Cytometry 10-20 ug/ml, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:50-1:100, Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:10-1:500, Immunohistochemistry-Frozen 1:10-1:500, CyTOF-ready
Application Notes	This SSEA3 antibody is useful for Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry frozen and paraffin sections, Immunoprecipitation and Western Blot. This antibody is CyTOF ready.

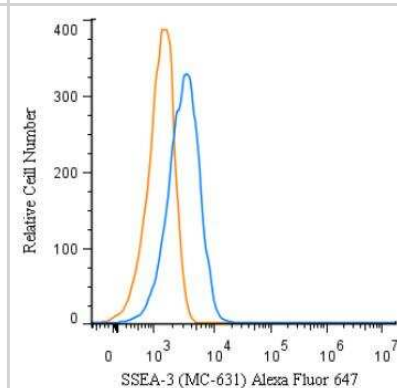


Images

Immunocytochemistry/Immunofluorescence: SSEA-3 Antibody (MC-631) [NB100-1832] - PSC characterisation. Human PSC-1 characterized for typical undifferentiated colony morphology in expression of pluripotency markers Nanog (Catalog # AF1997), OCT-3/4 (Catalog # AF1759), SSEA-3 (NB100-1832), SSEA-4 (Catalog # MAB1435) after immunofluorescence staining. Corresponding nuclei stains with DAPI shown. Image collected and cropped by CiteAb from the following publication (<https://www.nature.com/articles/s41598-018-33899-6>), licensed under a CC-BY license.

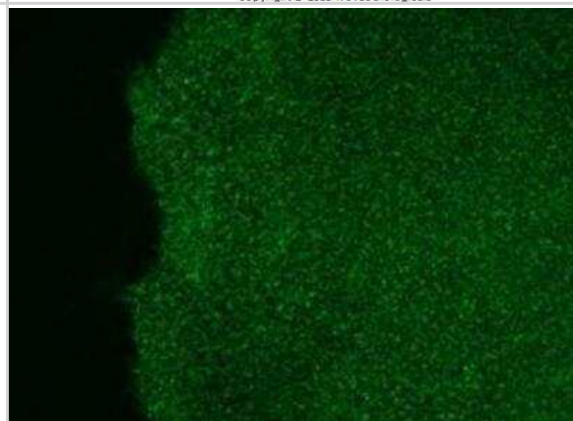


Flow Cytometry: SSEA-3 Antibody (MC-631) [NB100-1832] - A surface stain was performed on Jurkat cells with SSEA-3 Antibody (MC-631) NB100-1832AF647 (blue) and a matched isotype control (orange). Cells were incubated in an antibody dilution of 5 ug/mL for 20 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.

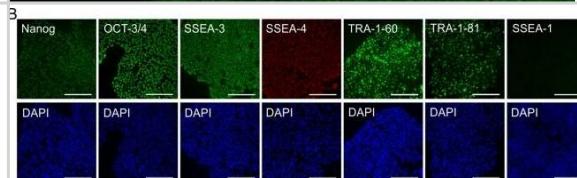


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Immunocytochemistry/Immunofluorescence: SSEA-3 Antibody (MC-631) [NB100-1832] - Analysis of human embryonic stem cells stained with SSEA-3 antibody detected with Alexa Fluor 488 anti-rat IgM secondary antibody.



PSC characterisation. (A) Human PSC-1 characterized for A) typical undifferentiated colony morphology in phase contrast image and (B) expression of pluripotency markers Nanog, OCT-3/4, SSEA-3, SSEA-4, TRA-1-60, and TRA-1-81, and lack of expression of early differentiation marker SSEA-1 after immunofluorescence staining. Corresponding nuclei stains with DAPI shown. (C) Cells showed normal female (46, XX) karyotype after 28 passages in total (9 passages in feeder-free culture). The results of the KaryoLite BoBs assay are shown as signal relative to karyotypically normal female (/F, red) and male (/M, blue) genomic DNA used as a reference (equal to 1) for each of the probes covering both p and q arms of all chromosomes. Software threshold for changes shown as a green lines and deviations in red. (D) Pluripotency shown after spontaneous differentiation in vitro as expression of markers for mesoderm, endoderm, and ectoderm. All scale bars 200 um. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/30341351>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Filidou E, Kandilogiannakis L, Tarapatzi G et al. A Simplified and Effective Approach for the Isolation of Small Pluripotent Stem Cells Derived from Human Peripheral Blood Biomedicines 2023-03-05 [PMID: 36979766] (Immunocytochemistry/ Immunofluorescence, Human)

Kaur S, Abu-Shahba AG, Paananen RO et al. Small non-coding RNA landscape of extracellular vesicles from human stem cells Sci Rep 2018-10-21 [PMID: 30341351] (IF/IHC, Human)

Hakala H, Rajala K, Ojala M et al. Comparison of biomaterials and extracellular matrices as a culture platform for multiple, independently derived human embryonic stem cell lines Tissue Eng Part A 2009-01-10 [PMID: 19132919] (ICC/IF, Human)

Matin, MM et al. Specific knockdown of Oct4 and beta2-microglobulin expression by RNA interference in human embryonic stem cells and embryonic carcinoma cells. Stem Cells;22(5):659-68. 2004-01-01 [PMID: 15342930]

Henderson, JK et al. Preimplantation human embryos and embryonic stem cells show comparable expression of stage-specific embryonic antigens. Stem Cells;20(4):329-37. 2002-01-01 [PMID: 12110702] (FLOW, Human)

Przyborski SA. Isolation of human embryonal carcinoma stem cells by immunomagnetic sorting. Stem Cells;19(6):500-4. 2001-01-01 [PMID: 11713341] (ICC/IF, Human)

Kannagi R, Cochran NA, Ishigami F et al. Stage-specific embryonic antigens (SSEA-3 and -4) are epitopes of a unique globo-series ganglioside isolated from human teratocarcinoma cells. EMBO J;2(12):2355-61. 1983-01-01 [PMID: 6141938] (WB, Human)

Skottman H. Derivation and characterization of three new human embryonic stem cell lines in Finland In Vitro Cell Dev Biol Anim 2010-02-24 [PMID: 20177999]



Procedures

Serum protocol for SSEA-3 Antibody (NB100-1832)

SSEA-3 Antibody (MC-631):

Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.





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Products Related to NB100-1832

NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF005	Goat anti-Rat IgG Secondary Antibody [HRP]
NB7115	Goat anti-Rat IgG (H+L) Secondary Antibody [HRP]
NBP1-96776	Rat IgM Isotype Control

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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