Product Datasheet

SSEA-1 Antibody (MC-480) - BSA Free
NB100-1831

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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Publications: 8

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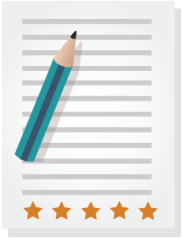
Updated 2/21/2025 v.20.1



NB100-1831

SSEA-1 Antibody (MC-480) - BSA Free

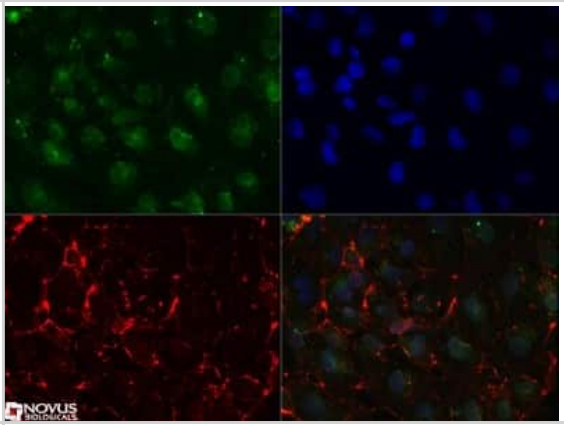
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	MC-480
Preservative	0.02% Sodium Azide
Isotype	IgM
Purity	IgM purified
Buffer	PBS

Product Description	
Host	Mouse
Gene ID	2526
Gene Symbol	FUT4
Species	Human, Mouse, Rat, Chimpanzee
Reactivity Notes	This antibody recognizes SSEA-1 in mouse EC and ES cells but not human, but SSEA1 is expressed by some human differentiated cell types (ie: trophoblasts). Reactivity with Rat is reported by Kim et al. 2007 (PMID 17548530). Use in Chimpanzee reported in scientific literature (PMID:32045848).
Marker	Embryonic Stem Cell Marker
Immunogen	F9 tetracarcinoma stem cells (X-irradiated).

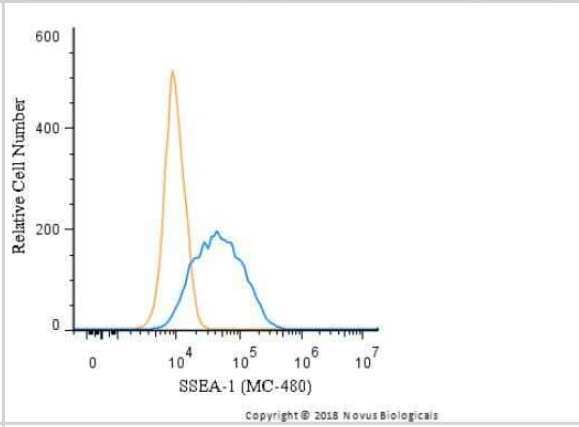
Product Application Details	
Applications	Western Blot, Simple Western, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 2 ug/ml, Simple Western 1:10, Flow Cytometry 2.5 ug/million cells, Immunohistochemistry 1:50-1:200, Immunocytochemistry/ Immunofluorescence 1:50-1:200, Immunohistochemistry-Paraffin 1:50-1:200, Immunohistochemistry-Frozen 1:50-1:200
Application Notes	This SSEA1 antibody is useful for Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry-Frozen and Paraffin. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See Simple Western Antibody Database for Simple Western validation: Tested in Human Brain lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:10, apparent MW was 54 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue.

Images

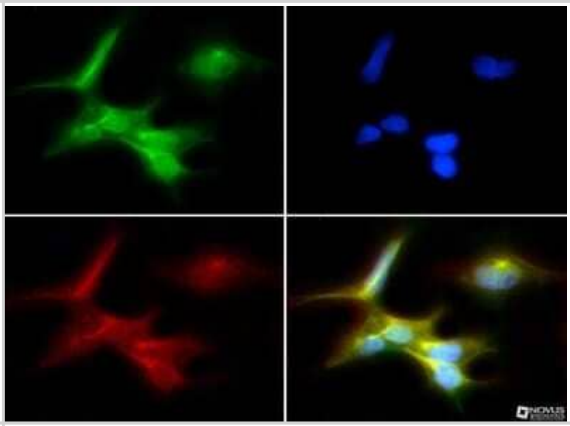
Immunocytochemistry/Immunofluorescence: SSEA-1 Antibody (MC-480) [NB100-1831] - SSEA1 antibody (0.1ug/ml) was tested in Ntera2 cells with Dylight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red). Image objective 40x.



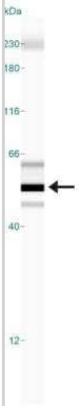
Flow Cytometry: SSEA-1 Antibody (MC-480) [NB100-1831] - An intracellular stain was performed on Jurkat cells with SSEA-1 Antibody (MC-480)NB100-1831 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature, followed by mouse IgM Alexa Fluor 488-conjugated secondary antibody.



Immunocytochemistry/Immunofluorescence: SSEA-1 Antibody (MC-480) [NB100-1831] - SSEA1 antibody was tested in Ntera-2 cells with FITC (green). Nuclei and alpha-tubulin were counterstained with Dapi (blue) and Dylight 550 (red).



Simple Western: SSEA-1 Antibody (MC-480) [NB100-1831] - Simple Western lane view shows a specific band for SSEA1 in 0.5 mg/ml of Human Brain lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



Publications

Colvin KL, Wolter-Warmerdam K, Hickey F et Al. Altered peripheral blood leukocyte subpopulations, function, and gene expression in children with Down syndrome: implications for respiratory tract infection Eur J Med Genet 2024-03-19 [PMID: 38325643]

Lin ZY, Nakai R, Hirai H et al. Reprogramming of chimpanzee fibroblasts into a multipotent cancerous but not fully pluripotent state by transducing iPSC factors in 2i/LIF culture Differentiation 2020-02-04 [PMID: 32045848] (ICC/IF, Chimpanzee)

Zhang M, Wang C, Jiang H et al. Derivation of novel naive-like porcine embryonic stem cells by a reprogramming factor-assisted strategy FASEB J. 2019-05-24 [PMID: 31125263]

Meng S, Su Z, Liu Z et al. Rac1 contributes to cerebral ischemia reperfusion-induced injury in mice by regulation of Notch2. Neuroscience. 2015-08-20 [PMID: 26299339] (WB, Mouse)

Details:
SSEA1 antibody was used at 2ug/ml concentration for WB assay on lysates of neuron stem-like cells that were treated with Notch inhibitor DAPT, Notch2 siRNA or Rac1 siRNA, or a combination of Rac1 siRNA with NICD2 (Fig. 7C).

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] (FLOW, Human)

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]

Kanatsu-Shinohara M, Ogonuki N, Inoue K, Miki H, Ogura A, Toyokuni S, Shinohara T. Long-term proliferation in culture and germline transmission of mouse male germline stem cells. Biol Reprod;69(2):612-6. 2003-08-01 [PMID: 12700182] (FLOW, Mouse)

Reubinoff BE, Pera MF, Fong CY, Trounson A, Bongso A. Embryonic stem cell lines from human blastocysts: somatic differentiation in vitro. Nat Biotechnol;18(4):399-404. 2000-04-01 [PMID: 10748519] (ICC/IF, Human)

Procedures

Serum protocol for SSEA-1 Antibody (NB100-1831)
SSEA-1 Antibody (MC-480):
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 1:25,0000 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 NB100-1831

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP2-62224	Mouse IgM Isotype Control (PFR-03)
H00002526-Q01-10ug	Recombinant Human SSEA-1 GST (N-Term) Protein

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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