

Antibodies

Anti-Mouse SSEA-1 (CD15) Antibody, Clone MC-480, Biotin

Mouse monoclonal IgM antibody
against human, mouse, rat SSEA-1
(CD15), biotin-conjugated

Catalog #60060BT

100 µg 0.5 mg/mL



Scientists Helping Scientists™ | WWW.STEMCELL.COM

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

The MC-480 antibody reacts with a terminal carbohydrate epitope, stage-specific embryonic antigen-1 (SSEA-1), which is expressed on a large-molecular-mass (> 200 kDa) glycoprotein on the surface of early mouse embryos, mouse embryonal carcinoma (EC), embryonic stem (ES) cells and mouse and human embryonic germ (EG) cells. SSEA-1 is not expressed on undifferentiated human EC, ES or induced pluripotent stem (iPS) cells, or rhesus monkey ES cell lines. Its expression on mouse ES cells is decreased upon differentiation, whereas in humans, expression is upregulated during differentiation. SSEA-1 is also found on adult human granulocytes and monocytes, where it is denoted CD15, and the MC-480 antibody recognizes the CD15 marker on these cell types. It has been reported that SSEA-1 has roles in cell adhesion and migration, and regulation of cell differentiation.

Target Antigen Name:	SSEA-1 (CD15)
Alternative Names:	3-FAL, CD15, Lewis X, SSEA1, Stage-specific embryonic antigen 1, X-hapten
Gene ID:	14345
Species Reactivity:	Human, Mouse, Rat
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	MC-480
Isotype:	IgM, kappa
Immunogen:	Mouse F9 teratocarcinoma cells (X-irradiated)
Conjugate:	Biotin

Applications

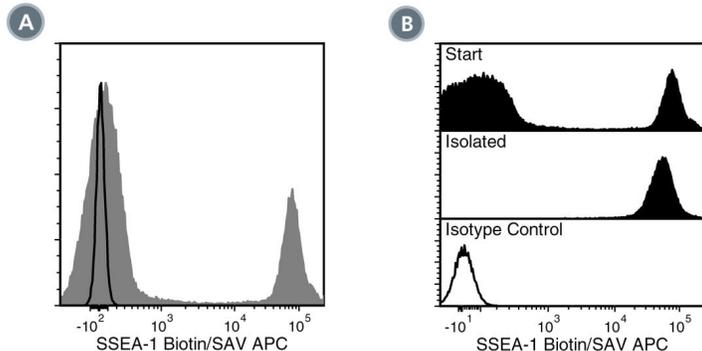
Verified:	FC
Reported:	FC, IHC, IP
Special Applications:	This antibody clone has been verified for labeling human ES and iPS cells grown in TeSR™-E8™ (Catalog #05940), mTeSR™1 (Catalog #85850) and TeSR™2 (Catalog #05860).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography and conjugated with biotin under optimal conditions. The solution is free of unconjugated biotin.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	For flow cytometry, the suggested use of this antibody is $\leq 1 \mu\text{g}$ per 1×10^6 cells in 100 µL or per 100 µL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application.

Data



(A) Flow cytometry analysis of human buffy coat nucleated cells labeled with Anti-Human SSEA-1 Antibody, Clone MC-480, Biotin, followed by streptavidin (SAV) APC (filled histogram), or a mouse IgM, kappa biotin isotype control antibody, followed by SAV APC (solid line histogram).
 (B) Flow cytometry analysis of human buffy coat nucleated cells processed with the EasySep™ HLA Whole Blood CD15 Positive Selection Kit and labeled with Anti-Human SSEA-1 Antibody, Clone MC-480, Biotin, followed by SAV APC. Histograms show labeling of buffy coat nucleated cells (Start) and isolated cells (Isolated). Labeling with a mouse IgM, kappa biotin isotype control antibody, followed by SAV APC is shown (solid line histogram).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

1. Ciriza J et al. (2015) Murine CD133+CD49f low/+ cells derived from ESCs differentiate into insulin producing cells in vivo. *Int J Stem Cell Res Ther* 2:004. (FC)
2. Kita H et al. (2015) Dimethyl sulfoxide induces chemotherapeutic resistance in the treatment of testicular embryonal carcinomas. *Oncol Lett* 10: 661–6. (ICC, IF)
3. Yoshimitsu M et al. (2015) Successful induction of pluripotent stem cells from a Fabry disease mouse model: toward the development of safe lentiviral gene therapy. *J Stem Cell Res Ther* 5(1): 259. (FC)
4. Bittencourt D et al. (2014) Role of distinct surfaces of the G9a ankyrin repeat domain in histone and DNA methylation during embryonic stem cell self-renewal and differentiation. *Epigenetics Chromatin* 7(1): 27. (FACS, FC)
5. Naeemipour M et al. (2013) Expression dynamics of pluripotency genes in chicken primordial germ cells before and after colonization of the genital ridges. *Mol Reprod Dev* 80(10): 849–61. (FACS, ICC, IF)
6. Izadyar F et al. (2008) Generation of multipotent cell lines from a distinct population of male germ line stem cells. *Reproduction* 135(6): 771–84. (FC, ICC, IF)
7. Ueda S et al. (2008) Establishment of rat embryonic stem cells and making of chimera rats. *PLoS One* 3(7): e2800. (IF)
8. Anjos-Afonso F & Bonnet D. (2007) Nonhematopoietic/endothelial SSEA-1+ cells define the most primitive progenitors in the adult murine bone marrow mesenchymal compartment. *Blood* 109(3): 1298–306.
9. Fenderson BA et al. (2006) Staining embryonic stem cells using monoclonal antibodies to stage-specific embryonic antigens. *Methods Mol Biol* 325: 207–24.
10. Cui L et al. (2004) Spatial distribution and initial changes of SSEA-1 and other cell adhesion-related molecules on mouse embryonic stem cells before and during differentiation. *J Histochem Cytochem* 52(11): 1447–57.
11. Henderson JK et al. (2002) Preimplantation human embryos and embryonic stem cells show comparable expression of stage-specific embryonic antigens. *Stem Cells* 20(4): 329–37. (FC, IF)
12. Thomson JA et al. (1995) Isolation of a primate embryonic stem cell line. *Proc Natl Acad Sci USA* 92(17): 7844–8. (IHC)
13. Solter D & Knowles BB. (1978) Monoclonal antibody defining a stage-specific mouse embryonic antigen (SSEA-1). *Proc Natl Acad Sci USA* 75(11): 5565–9.

PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2020 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, Scientists Helping Scientists, and EasySep are trademarks of STEMCELL Technologies Canada Inc. E8, mTeSR, and TeSR are trademarks of WARF. Corning and Matrigel are registered trademarks of Corning Incorporated. All other trademarks are the property of their respective holders. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.