



Product Specification Sheet

Product Name	Stemgent® SSEA-3 Antibody (Purified), Rat anti-Mouse/Human
Description	The MC-631 monoclonal antibody reacts with stage-specific embryonic antigen-3 (SSEA-3), a carbohydrate epitope on the major ganglioside that is expressed upon the surface of human embryonal carcinoma (EC) cells, embryonic germ (EG) cells, and embryonic stem (ES) cells. The expression of SSEA-3 on human ES cells is down-regulated upon differentiation. In mouse, SSEA-3 is expressed on unfertilized eggs and preimplantation to early cleaved embryos, and no immunoreactivity is evident in undifferentiated murine EC, ES, and EG cells. SSEA-3 can be used to characterize human ES cells and monitor their differentiation.
Catalog Number	09-0014
Size	100 µl
Concentration	0.5 mg/ml
Clone	MC-631
Isotype	Rat IgM, κ
Immunogen	4-8 cell stage mouse embryos
Reactivity	Mouse, Human
Preparation	This antibody was purified by affinity chromatography.
Formulation	Phosphate-buffered solution, pH 7.2, and 0.09% sodium azide
Storage and Stability	Store at 4°C protected from light. Do not freeze. Stable for 6 months from date of receipt when stored as directed.
Quality Control	Tested by immunocytochemistry (Figure 1) and flow cytometry (Figure 2) to ensure product quality.
Recommended Usage	The suggested use of this antibody is a 1:100 dilution for immunocytochemistry and 0.25 µg per 1 x 10 ⁶ viable cells in 100 µl for flow cytometry. For application specific protocols, please reference <i>Protocol: Immunocytochemistry</i> and <i>Protocol: Flow Cytometry</i> online at www.stemgent.com/support/protocols .

For research use only. Not for use in diagnostic procedures.



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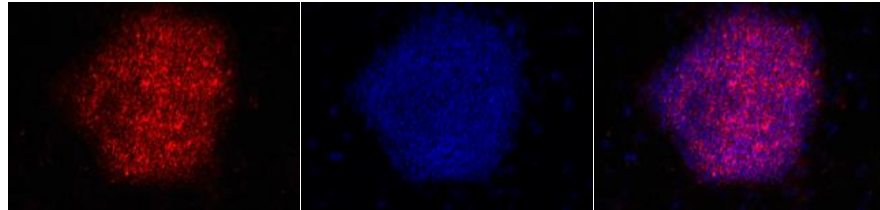


Figure 1. Immunocytochemistry analysis of SSEA-3 on H1 human ES cells. Cells were stained with SSEA-3 Antibody (Purified) at a 1:100 dilution followed by a secondary Cy™ 3 antibody (red). DAPI staining was performed to visualize nuclei (blue).

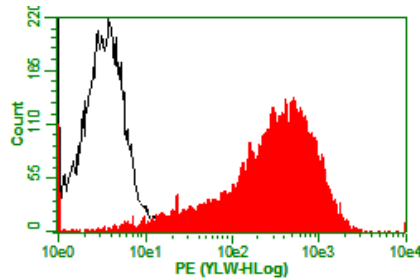


Figure 2. Flow cytometry analysis of SSEA-3 on H1 human ES cells. Red histogram represents SSEA-3 Antibody (Purified) and open histogram represents isotype control at the same concentration.

References

1. Kannagi, R., Cochran, N.A., Ishigami, F., Hakomori, S., Andrews, P.W., Knowles, B.B., and Solter, D. (1983) Stage-specific embryonic antigens (SSEA-3 and -4) are epitopes of a unique globo-series ganglioside isolated from human teratocarcinoma cells. *EMBO J.* 2: 2355-2361.
2. Henderson, J.K., Draper, J.S., Baillie, H.S., Fishel, S., Thomson, J.A., Moore, H., and Andrews, P.W. (2002) Preimplantation human embryos and embryonic stem cells show comparable expression of stage-specific embryonic antigens. *Stem Cells* 20: 329-337.
3. Brimble, S.N., Sherrer, E.S., Uhl, E.W., Wang, E., Kelly, S., Merrill, A.H. Jr., Robins, A.J., and Schulz, T.C. (2007) The cell surface glycosphingolipids SSEA-3 and SSEA-4 are not essential for human ESC pluripotency. *Stem Cells* 25: 54-62.

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