

Monoclonal Antibody to SSEA4 - Aff - Purified

Alternate names:	Embryonic Stem Cell Marker, SSEA-4, Stage-Specific Embryonic Antigen-4
Catalog No.:	AM12115PU-N
Quantity:	25 µg
Concentration:	0.5 mg/ml
Background:	Embryonic stem cells have the ability to remain undifferentiated and proliferate indefinitely in vitro, while maintaining the potential to differentiate into derivatives of all three embryonic germ layers. Undifferentiated human embryonal carcinoma (EC) cells are the stem cells of teratocarcinomas and are characterized by the expression of stage specific embryonic antigens SSEA-1 and SSEA-3, TRA-2-39, TRA-2-54 and the high molecular weight glycoproteins TRA-1-60 and TRA-1-81. In addition, SSEA-1, SSEA-3 and SSEA-4 are markers that characterize embryonic stem (ES) and embryonic germ (EG) cells. Specifically, undifferentiated cells from the human ES cell line H7 express SSEA-3, SSEA-4, TRA-1-60 and TRA-1-81, but not SSEA-1. Interferon induces expression of SSEA-3 and SSEA-4 in EC cells without inhibiting their growth or inducing their differentiation.
Host / Isotype:	Mouse / IgG3
Clone:	MC-813-70
Immunogen:	Human embryonal carcinoma cell line 2102Ep
Format:	State: Liquid purified Ig fraction Purification: Affinity Chromatography on Protein G Buffer System: PBS containing 0.05% BSA and 0.05% Sodium Azide
Applications:	Western blot. Immunoprecipitation. Flow (Cell Surface): 0.1 µg/10e6 cells. Immunofluorescence/Immunocytochemistry. Immunohistochemistry (Paraffin). Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody reacts with the Stage-specific embryonic antigen-4 (SSEA-4) that is expressed upon the surface of human teratocarcinoma stem cells (EC), human embryonic germ (EG) cells and human embryonic stem (ES) cells. No immunoreactivity is evident with undifferentiated murine EC, ES and EG cells. Expression of SSEA-4 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-4 expression.
Species Reactivity:	Tested: Human

Storage: Store the antibody (in aliquots) at -20°C
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings: 1. Kannagi, R., et al., EMBO J. 2: 2355 (1983)
2. Gang E.J. et al. Blood. Feb 15;109(4):1743-51 (2007)
3. Henderson, J.K., et al. Stem Cells. 20: 329 (2002)
4. Müller T, et al. Hum Reprod. 2009 Feb 27 (2009)

Pictures: **Figure 1.** Cell surface flow cytometric analysis of SSEA-4 on 2102Ep cells using 0.1 µg/10e6 cells of SSEA4 antibody (Cat#AM12115PU-N). Green: Isotype Control Red: SSEA-4 antibody.

