Revision 3

Store at -20C

#9094

# StemLight™ Pluripotency Surface Marker Antibody Kit

1 Kit (3 x 20 microliters)

Cell Signaling TECHNOLOGY®

**Orders:** 877-616-CELL (2355)
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Product Includes | Product # | Quantity | Mol. Wt | Isotype/Source |
|---|---|---|---|---|
| SSEA4 (MC813) Mouse mAb | 4755 | 20 µl | N/A kDa | Mouse IgG3 |
| TRA-1-60(S) (TRA-1-60(S)) Mouse mAb | 4746 | 20 µl | 200-400 kDa | Mouse IgM |
| TRA-1-81 (TRA-1-81) Mouse mAb | 4745 | 20 µl | 200-400 kDa | Mouse IgM |

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

## Description

The StemLight® Surface Marker Kit contains a panel of antibodies for the detection of antigens that are specifically expressed on the surface of human pluripotent cells. The kit can be used to track the pluripotent potential of human embryonic stem (ES) or induced pluripotent (iPS) cells. The loss of these markers indicates a loss of pluripotency or differentiation of the culture. The kit components are pre-optimized for parallel use in immunofluorescent analysis.

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

## Background

Pluripotency is the ability of a cell to differentiate into cell types of the three germ layers, the endoderm, ectoderm, and mesoderm. It is a property shared by embryonic stem cells, embryonic carcinoma, and induced pluripotent cells.

SSEA4, TRA-1-81, and TRA-1-60 antibodies recognize antigens expressed on the cell surface of all pluripotent cells. SSEA4 recognizes a glycolipid carbohydrate epitope (1). TRA-1-60(S) and TRA-1-81 antibodies recognize different proteoglycan epitopes on variants of the same protein, podocalyxin (2). These epitopes are neuraminidase sensitive and resistant, respectively. Reactivity of SSEA4, TRA-1-81 and TRA-1-60 antibodies with their respective cell surface markers are lost upon differentiation of pluripotent cells, corresponding with a loss of pluripotent potential (3).

## Background References

1. Henderson, J.K. et al. (2002) *Stem Cells* 20, 329-37.
2. Draper, J.S. et al. (2002) *J Anat* 200, 249-58.
3. Schopperle, W.M. and DeWolf, W.C. (2007) *Stem Cells* 25, 723-30.

## Trademarks and Patents



## Limited Uses

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