

Reagents Provided

GloLIVE™ Anti-human/mouse SSEA-4-NL493:

Anti-human/mouse SSEA-4 antibody conjugated to NorthernLights™ 493 fluorochrome. Supplied as 50X concentration of antibody in 0.5 mL PBS.

Clone #: MC81370

Isotype: mouse IgG₃

Storage

Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2-8 °C.

Intended Use

Live-cell imaging to visualize the expression of human/mouse SSEA-4 by fluorescence microscopy. The cells are able to continue in culture after staining without affecting cell proliferation or stemness.

Product Description

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with the human embryonal carcinoma cell line 2102Ep. The IgG fraction of the tissue culture supernatant was purified by Protein A or G affinity chromatography. The purified antibody was then conjugated to fluorochrome NL493. The spectral characteristics of NL493 are provided, along with those of FITC and Alexa Fluor® 488 for comparison. This antibody is produced with no azide. A 1X antibody solution has an endotoxin level of ≤ 5 EU/mL.

Fluorochrome	Absorption Maximum (nm)	Emission Maximum (nm)
NL493	493	514
FITC	492	520
Alexa Fluor 488	495	519

BG01V cells are licensed by ViaCyte, Inc.

NorthernLights is a trademark of R&D Systems, Inc.

Alexa Fluor is a registered trademark of Invitrogen, Inc.

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Background Information

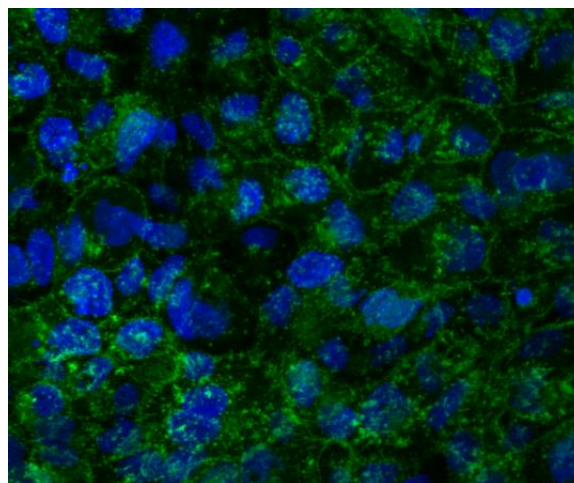
SSEA-4 is expressed on the surface of human pluripotent stem cells (ES and iPS), human embryonal carcinoma (EC) cells (the pluripotent stem cells of teratocarcinomas), and human embryonic germ cells (EG). Expression of SSEA-4 is down-regulated following differentiation of human ES/iPS cells. In contrast, the differentiation of murine ES and EC cells may be accompanied by an increase in SSEA-4 expression (1-4).

References

1. Shevinsky, L.H. *et al.* (1982) *Cell* **30**:697.
2. Kannagi, R. *et al.* (1983) *EMBO J.* **2**:2355.
3. Thomson, J.A. and J.S. Odorico (2000) *Trends Biotechnol.* **18**:53.
4. Draper, J.S. *et al.* (2002) *J. Anat.* **200**:249.

Immunocytochemistry Validation

This antibody has been tested for live-cell imaging using live, unfixed BG01V human embryonic stem cells. Antibody was diluted 1:50 to a final concentration of 1X in cell culture media and added to cells. Live cells were then incubated in a 37 °C/5% CO₂ incubator for 30 minutes. The media was then changed to fresh media without antibody. If a staining volume of 2 mL is used, this antibody can be used for 12 tests.



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Live BG01V cells were stained with GloLIVE anti-human/mouse SSEA-4 (Catalog # NLLC1435G; green) and counterstained with Hoechst 33342 (blue).