

Reagents Provided

GloLIVE™ Anti-human TRA-1-81-NL557: Anti-human TRA-1-81 antibody conjugated to NorthernLights™ 557 fluorochrome. Supplied as 50X concentration of antibody in 0.5 mL PBS.

Clone #: TRA-1-81

Isotype: mouse IgM

Storage

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

Intended Use

Live-cell imaging to visualize the expression of human TRA-1-81 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 human embryonal carcinoma cell line 2102Ep. The IgM fraction of the tissue culture supernatant was purified by anti-IgM chromatography. The purified antibody was then conjugated to fluorochrome NL557. The spectral characteristics of NL557 are provided, along with those of Rhodamine Red™-X (RRX) and Cy™3 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)
NL557	559	575
RRX	570	590
Cy3	548	562

BG01V cells are licensed from ViaCyte, Inc.

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

Rhodamine Red is a trademark of Invitrogen, Inc.

Cy is a trademark of GE Healthcare.

Background Information

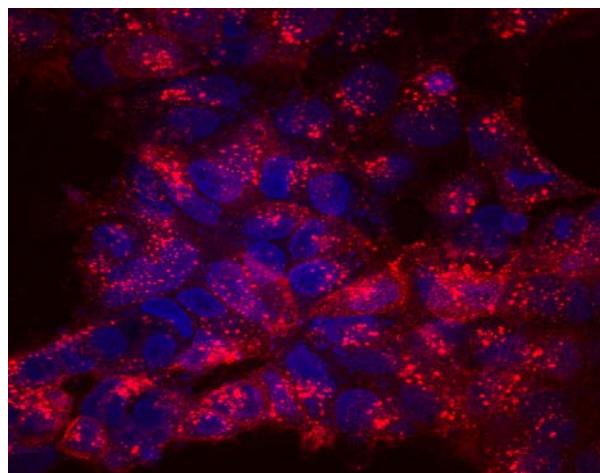
TRA-1-81 is a monoclonal antibody raised against a cell surface antigen of human embryonal carcinoma (EC) cells (1). The TRA-1-81 epitope is also found on human embryonic stem (ES) cells and primordial germ cells (2). Investigation into the identity of the TRA-1-81 epitope demonstrated that it is a type I lactosamine (3). Subsequent evidence implicated podocalyxin as a carrier for the TRA-1-81 epitope (4).

References

1. Andrews, P. *et al.* (1984) *Hybridoma* **3**:347.
2. Thomson, J. *et al.* (1998) *Science* **282**:1145.
3. Natunen, S. *et al.* (2011) *Glycobiology*. **21**:1125.
4. Schopperle, W. and W. DeWolf (2007) *Stem Cells* **25**:723.

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.



GloLIVE Anti-human TRA-1-81-NL557

Live BG01V cells were stained with GloLIVE anti-human TRA-1-81 (Catalog # NLLC16581R; red) and counterstained with Hoechst 33342 (blue).