### **Anti-Human TRA-1-81** Antibody, Clone TRA-1-81, PE

## **Antibodies**

Mouse monoclonal IgM antibody against human, rat, rhesus TRA-1-81,

PE-conjugated

Catalog #60065PE #60065PE.1 100 Tests 5 µL/test

25 Tests 5 µL/test



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## **Product Description**

The TRA-1-81 antibody reacts with a carbohydrate epitope on TRA-1-81, a high-molecular-mass (> 200 kDa) glycoprotein expressed on the surface of human embryonal carcinoma (EC), embryonic germ (EG), embryonic stem (ES), and induced pluripotent stem (iPS) cells, as well as rhesus monkey and rat ES cell lines. No immunoreactivity is observed with mouse EC, EG, ES, or iPS cells. The epitope of the TRA-1-81 antibody is associated with a keratan-sulfated transmembrane protein identified as podocalyxin and is resistant to treatment with neuraminidase.

Target Antigen Name: TRA-1-81 Alternative Names: Podocalyxin

Gene ID: 5420

Species Reactivity: Human, Rat, Rhesus

Mouse **Host Species:** Clonality: Monoclonal TRA-1-81 Clone: Isotype: IgM, kappa

Immunogen: Human embryonal carcinoma cell line 2102Ep cl.2A6

Conjugate: ΡF

# **Applications**

Verified: FC, ICC, IF

Reported: FC

Special Applications: This antibody clone has been verified for labeling human ES and iPS cells grown in TeSR™-E8™ (Catalog

#05940), mTeSR™1 (Catalog #05850) and TeSR™2 (Catalog #05860).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

# **Properties**

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin

Purification: The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions. The

solution is free of unconjugated PE and unconjugated antibody.

Stability and Storage: Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to

light. For product expiry date, please contact techsupport@stemcell.com.

Directions for Use: The suggested use of this antibody is: FC, 5 µL per 1 x 10^6 cells in 100 µL volume; ICC/IF, 100X dilution. It is

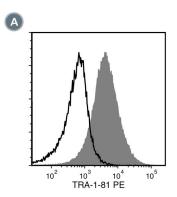
recommended that the antibody be titrated for optimal performance for each application.

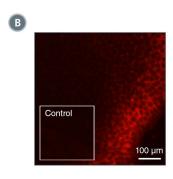
#### Anti-Human TRA-1-81 Antibody, Clone TRA-1-81, PE

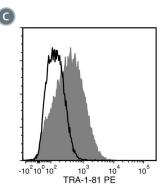
## **Antibodies**



### Data







(A) Flow cytometry analysis of human ES cells labeled with Anti-Human TRA-1-81 Antibody, Clone TRA-1-81, PE (filled histogram) or Mouse IgM, kappa Isotype Control Antibody, Clone MM-30, PE (Catalog #60069PE) (solid line histogram).

(B) Human ES cells were cultured in mTeSR<sup>™</sup>1 on Corning® Matrigel®-coated glass slides, then fixed and labeled with Anti-Human TRA-1-81 Antibody, Clone TRA-1-81, PE. Inset shows cells labeled with Mouse IgM, kappa Isotype Control Antibody, Clone MM-30, PE.

(C) Flow cytometry analysis of human iPS cells labeled with Anti-Human TRA-1-81 Antibody, Clone TRA-1-81, PE (filled histogram) or Mouse IgM, kappa Isotype Control Antibody, Clone MM-30, PE (solid line histogram).

### Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

### References

- 1. Naturen S et al. (2011) The binding specificity of the marker antibodies Tra-1-60 and Tra-1-81 reveals a novel pluripotency-associated type 1 lactosamine epitope. Glycobiology 21(9): 1125–30. (FC)
- 2. Miyoshi N et al. (2010) Defined factors induce reprogramming of gastrointestinal cancer cells. Proc Natl Acad Sci USA 107(1): 40-5. (IF)
- 3. Kuai XL et al. (2009) Differentiation of nonhuman primate embryonic stem cells along neural lineages. Differentiation 77(3): 229-38. (IF)
- 4. Lowry WE et al. (2008) Generation of human induced pluripotent stem cells from dermal fibroblasts. Proc Natl Acad Sci USA 105(8): 2883-8.
- 5. Ueda S et al. (2008) Establishment of rat embryonic stem cells and making of chimera rats. PLoS One 3(7): e2800. (IF)
- 6. Schopperle WM & DeWolf WC. (2007) The TRA-1-60 and TRA-1-81 human pluripotent stem cell markers are expressed on podocalyxin in embryonal carcinoma. Stem Cells 25(3): 723–30.
- 7. Henderson JK et al. (2002) Preimplantation human embryos and embryonic stem cells show comparable expression of stage-specific embryonic antigens. Stem Cells 20(4): 329–37. (FC, IF)
- 8. Thomson JA et al. (1995) Isolation of a primate embryonic stem cell line. Proc Natl Acad Sci USA 92(17): 7844-8. (IHC)
- 9. Andrews PW et al. (1984) Three monoclonal antibodies defining distinct differentiation antigens associated with different high molecular weight polypeptides on the surface of human embryonal carcinoma cells. Hybridoma 3(4): 347–61. (FC, IHC, WB)

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