

Antibodies

Anti-Human TRA-1-81 Antibody, Clone TRA-1-81, Alexa Fluor® 488

Mouse monoclonal IgM antibody
against human, rat, rhesus TRA-1-81,
Alexa Fluor® 488-conjugated

Catalog #60065AD
#60065AD.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
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	TRA-1-81
Isotype:	IgM, kappa
Immunogen:	Human embryonal carcinoma cell line 2102Ep cl.2A6
Conjugate:	Alexa Fluor® 488

Applications

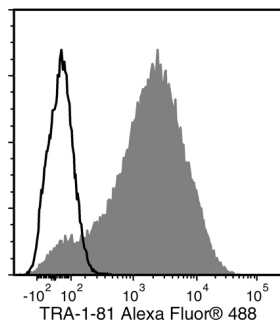
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for labeling human ES and iPS cells grown in TeSR™-E8™ (Catalog #05940), mTeSR™1 (Catalog #05850) and TeSR™2 (Catalog #05860).

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 Alexa Fluor® 488 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 488.
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:	For flow cytometry the suggested use of this antibody is 5 µL per 1 x 10 ⁶ cells in 100 µL volume. It is recommended that the antibody be titrated for optimal performance for each application.

Data



Flow cytometry analysis of human ES cells labeled with Anti-Human TRA-1-81 Antibody, Clone TRA-1-81, Alexa Fluor® 488 (filled histogram) or Mouse IgM, kappa Isotype Control Antibody, Clone MM-30, Alexa Fluor® 488 (Catalog #60069AD) (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. Natunen 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.
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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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