Monoclonal Anti-human Thrombopoietin R-Phycoerythrin

Catalog Number: FAB1016P
Lot Number: ABNW02
100 Tests

Reagents Provided

Phycoerythrin (PE)-conjugated mouse monoclonal anti-human Thrombopoietin R: Supplied as 75 µg of antibody in 1 mL saline containing up to 0.5% BSA and 0.1% sodium azide.

Clone #: 167639

Isotype: mouse IgG_{2A}

Reagents Not Provided

- Flow Cytometry Staining Buffer (Catalog # FC001) or other BSA-supplemented saline buffer.

Storage

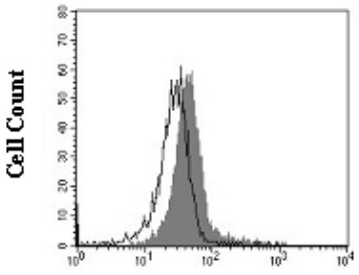
Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2° - 8° C.

Intended Use

Designed to quantitatively determine the percentage of cells bearing Thrombopoietin R within a population and qualitatively determine the density of Thrombopoietin R on cell surfaces by flow cytometry.

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 purified, NS0-derived, recombinant human Thrombopoetin receptor (rhTPO R; Accession # P40238). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. The purified antibody was then conjugated to PE fluorochrome. Cell surface expression of Thrombopoietin R is determined by flow cytometry using 488 nm wavelength excitation and monitoring emitted fluorescence with a detector optimized to collect peak emissions at 565 - 605 nm.



Thrombopoietin R-PE

TF-1 cells were stained with PE-conjugated anti-human Thrombopoietin R (Catalog # FAB1016P, filled histogram) or PE-conjugated isotype control (Catalog # IC003P, open histogram).

Background Information

Thrombopoietin receptor (Tpo R), also known as myeloproliferative leukemia protein (c-mpl), is a 95 kDa type I transmembrane protein that is a member of the type I cytokine receptor family within the hematopoietin/cytokine receptor superfamily.[1-4] The 635 amino acid (aa) full-length human Tpo R contains a 25 aa signal sequence, a 466 aa extracellular domain with a ligand binding domain and two fibronectin type III domains, a transmembrane (TM) domain and a cytoplasmic domain. The extracellular domain of human Tpo R shares 78%, 76%, 81%, 82% and 80% aa identity with mouse, rat, cow, dog, and horse, respectively.

References

1. Kaushansky, K. (2005) J. Clin. Invest. **115**:3339.
2. Deutsch, V.R. & A. Tomer (2006) Br. J. Haematol. **134**:453.
3. Vigon, I. *et al.* (1992) Proc. Natl. Acad. Sci. USA **89**:5640.
4. Mignotte, V. *et al.* (1994) Genomics **20**:5.

Flow Cytometry Validation

This antibody has been tested for flow cytometry using TF-1 cells.

1. Cells may be Fc-blocked with 1 µg of human IgG/10^5 cells for 15 minutes at room temperature. Do not wash excess blocking IgG from this reaction.
2. After blocking, 10 µL of conjugated antibody was added to up to 1 x 10^6 cells and incubated for 30 minutes at room temperature.
3. Unbound antibody was removed by washing the cells twice in Flow Cytometry Staining Buffer (Catalog # FC001). Note that whole blood requires a RBC lysis step at this point using Flow Cytometry Human Lyse Buffer (Catalog # FC002).
4. The cells were resuspended in Flow Cytometry Staining Buffer for final flow cytometric analysis. As a control for this analysis, cells in a separate tube should be treated with PE-labeled mouse IgG_{2A} antibody. This procedure may need to be modified, depending upon the cell type and final utilization. Individual users may need to titrate to determine the optimal reagent amount for their specific use.

Warning: Contains sodium azide as a preservative - sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.

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