

## Product Information

Contents: Biotin anti-human CD180 (RP105, Toll-like Receptor/TLR Family)

Catalog Number: 13-1809

Sizes: 25 ug, 100 ug

Formulation: Phosphate buffer pH 7.2,  
150 mM NaCl, 0.09% NaN<sub>3</sub>

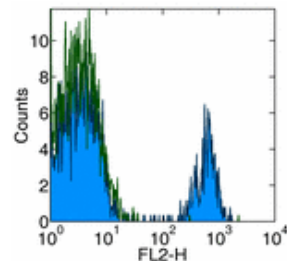
Storage Conditions: Store at 4°C.

DO NOT FREEZE.

Clone: MHR73-11

Isotype: Mouse IgG1, κ

HLDA No.: N/A



Surface staining of normal human peripheral blood cells with anti-human CD180 (MHR73-11) PE. Appropriate isotype controls were used (open histogram). Cells in the lymphocyte population were used for analysis.

## Available Formats of This Product

Cat. No.	Format	Excite (nm)	Emit (nm)	Reported Applications
12-1809	PE anti-human CD180 (RP105, Toll-like Receptor/ TLR Family)	488	575	FC
13-1809	Biotin anti-human CD180 (RP105, Toll-like Receptor/ TLR Family)	N/A	N/A	FC
14-1809	Affinity Purified anti-human CD180 (RP105, Toll-like Receptor/ TLR Family)	N/A	N/A	FA FC IHC IP
16-1809	Functional Grade* Purified anti-human CD180 (RP105, Toll-like Receptor/ TLR Family)	N/A	N/A	FA FC

\*Functional Grade™ (FG™): Azide-free, sterile-filtered, and endotoxin < 0.001 ng/μg.  
Purified: Contains azide, not sterile-filtered, and not endotoxin tested.

## Description

The MHR73-11 monoclonal antibody reacts with human CD180 (RP105). This 105 kDa type I transmembrane molecule is a member of the TLR family of proteins characterized by an extracellular domain with leucine-rich repeats and a cytoplasmic domain with homology to the type I IL-1 receptor. RP105 physically associates with another molecule called MD-1 and is expressed on B, monocytes/macrophages, and dendritic cells. Histological studies show that RP105 is expressed mainly on mature B cells in mantle zones, while germinal center cells are either dull or negative. The RP105/MD-1 complex in concert with TLR4 mediates B cell recognition and signaling of LPS. MHR73-11 activates B cells, leading to increases in cell size, expression of the costimulatory molecule CD80, and DNA synthesis. Moreover, ligation of RP105 protects B cells from irradiation- or dexamethasone-induced apoptosis. Thus, RP105 is a signal transduction molecule and plays a role in regulation of B cell growth and death. A significant proportion of circulating B cells in SLE patients is RP105 negative. Loss of RP105 is associated with B cell activation and increased disease activity in SLE patients.

## Usage

For research use only, not for diagnostic or therapeutic use. MHR73-11 has been reported for use in flow cytometric analysis.

## Applications Tested

The MHR73-11 antibody has been tested by flow cytometric analysis of human peripheral blood leukocytes. This can be used at less than or equal to 1 μg per 100 μl blood (or per 1 million cells in 100 μl total staining volume). It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

## Related Products

- Cat. 12-1809 PE anti-human CD180 (RP105, Toll-like Receptor/ TLR Family) (clone MHR73-11)
- Cat. 14-1809 Affinity Purified anti-human CD180 (RP105, Toll-like Receptor/ TLR Family) (clone MHR73-11)
- Cat. 16-1809 Functional Grade Purified anti-human CD180 (RP105, Toll-like Receptor/ TLR Family) (clone MHR73-11)
- Cat. 11-4317 Streptavidin-FITC (Fluorescein isothiocyanate)

Cat. 12-4317 Streptavidin-PE (Phycoerythrin)  
Cat. 17-4317 Streptavidin Allophycocyanin (SA-APC)  
Cat. 13-4714 Biotin Mouse IgG1, K Isotype Control

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## References

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Koarada, S., Y. Tada, et al. 1999. B cells lacking RP105, a novel B cell antigen, in systemic lupus erythematosus. *Arthritis Rheum* 42 (12): 2593-600.

Miura, Y., K. Miyake, et al. 1996. Molecular cloning of a human RP105 homologue and chromosomal localization of the mouse and human RP105 genes (Ly64 and LY64). *Genomics* 38(3): 299-304.

Miura, Y., R. Shimazu, et al. 1998. RP105 is associated with MD-1 and transmits an activation signal in human B cells. *Blood* 92(8): 2815-22.

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