

TECHNICAL DATA SHEET

CyFlow™ CD180 Low Endotoxin Anti-Hu; Clone G28-8

REF CP389435

For Research Use Only.
Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD180
Alternative Names	RP105, Bgp95, Ly64
Clone	G28-8
Clonality	monoclonal
Format	Low Endotoxin
Host / Isotype	Mouse / IgG1
Species Reactivity	Human
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	Human tonsillar B cells

Specificity

The mouse monoclonal antibody G28-8 recognizes CD180 antigen, a 95-105 kDa TLR-like glycoprotein expressed on peripheral blood monocytes and dendritic cells, mantle zone B cells and marginal zone B cells, but very weakly on germinal center B cells.

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

Application

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Immunoprecipitation
- Functional assays

Storage Buffer

The reagent is provided in azide-free phosphate buffered saline (PBS) solution, pH ≈7.4; 0.2 µm filter sterilized. Endotoxin level is less than 0.01 EU/µg of the protein, as determined by the LAL test.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

CD180 (RP105, Bgp95, LY64) is a type I membrane glycoprotein of Toll-like receptor (TLR) family. Its cytoplasmic tail is short and unlike the TLRs, it lacks the TIR domain. CD180 expression is dependent on the coexpression of its helper molecule, MD-1, and mirrors that of TLR4 on antigen-presenting cells. CD180 regulates recognition of LPS and signaling in B cells, via interacting directly with the TLR4 signaling complex, inhibiting its ability to bind microbial ligands. Ligation of CD180 by monoclonal antibodies leads to B cell activation, upregulation of CD80/CD86, and increase in cell size.

References

- Valentine MA, Clark EA, Shu GL, Norris NA, Ledbetter JA: Antibody to a novel 95-kDa surface glycoprotein on human B cells induces calcium mobilization and B cell activation. J Immunol. 1988 Jun 15; 140(12):4071-8. < PMID: 3259604 >
- Clark EA, Shu GL, Lüscher B, Draves KE, Banchereau J, Ledbetter JA, Valentine MA: Activation of human B cells: Comparison of the signal transduced by IL-4 to four different competence signals. J Immunol. 1989 Dec 15; 143(12):3873-80. < PMID: 2480376 >
- Kikuchi Y, Koarada S, Tada Y, Ushiyama O, Morito F, Suzuki N, Ohta A, Horiuchi T, Miyake K, Nagasawa K: Difference in B cell activation between dermatomyositis and polymyositis: analysis of the

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

expression of RP105 on peripheral blood B cells. Ann Rheum Dis. 2001 Dec; 60(12):1137-40. < PMID: 11709456 >

- Olson NE, Graves JD, Shu GL, Ryan EJ, Clark EA: Caspase activity is required for stimulated B lymphocytes to enter the cell cycle. J Immunol. 2003 Jun 15; 170(12):6065-72. < PMID: 12794135 >
- Yazawa N, Fujimoto M, Sato S, Miyake K, Asano N, Nagai Y, Takeuchi O, Takeda K, Okochi H, Akira S, Tedder TF, Tamaki K: CD19 regulates innate immunity by the toll-like receptor RP105 signaling in B lymphocytes. Blood. 2003 Aug 15; 102(4):1374-80. < PMID: 12714520 >
- Divanovic S, Trompette A, Atabani SF, Madan R, Golenbock DT, Visintin A, Finberg RW, Tarakhovsky A, Vogel SN, Belkaid Y, Kurt-Jones EA, Karp CL: Negative regulation of Toll-like receptor 4 signaling by the Toll-like receptor homolog RP105. Nat Immunol. 2005 Jun; 6(6):571-8. < PMID: 15852007 >
- Divanovic S, Trompette A, Petiniot LK, Allen JL, Flick LM, Belkaid Y, Madan R, Haky JJ, Karp CL: Regulation of TLR4 signaling and the host interface with pathogens and danger: the role of RP105. J Leukoc Biol. 2007 Aug; 82(2):265-71. < PMID: 17470533 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com