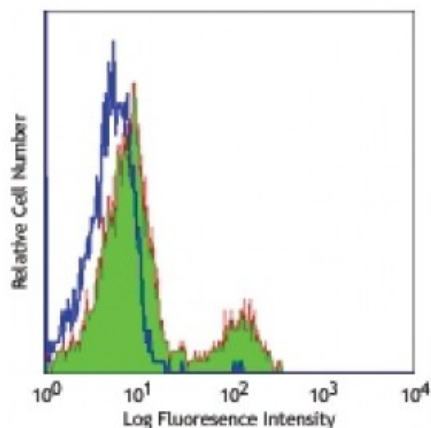


**Purified anti-human CD40**

**Catalog # / Size:** 2165010 / 100 µg  
**Clone:** HB14  
**Isotype:** Mouse IgG1, κ  
**Reactivity:** Human  
**Preparation:** The antibody was purified by affinity chromatography.  
**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.  
**Workshop Number:** V CD40.5  
**Concentration:** 0.5



Human peripheral blood lymphocytes stained with purified HB14, followed by anti-mouse IgGs FITC

**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤0.125 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

**Application Notes:** Additional reported applications (for the relevant formats) include: costimulation of B cell proliferation, partial inhibition of CD40 binding to CD40L, and prevention of B cell apoptosis.<sup>1</sup> Alone, or in combination with TLR ligands, clone HIB14 stimulates B cells to produce IL-10 and differentiates it into regulatory B10 (IL-10 producing B cells).<sup>7</sup> The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 313010).

**Application References:**

1. Pound JD, *et al.* 1999. *Int. Immunol.* 11:11. (Costim)
2. Schlossman S, *et al.* Eds. 1995. *Leucocyte Typing V*. Oxford University Press. New York.
3. Armengol MP, *et al.* 2001. *Am. J. Pathol.* 159:861.
4. Cavanagh LL, *et al.* 2005. *Arthritis Res. Ther.* 7:R230.
5. Jayakumar A, *et al.* 2008. *Infect Immun.* 76:2138. [PubMed](#)
6. Sestak K, *et al.* 2007. *Vet. Immunol. Immunopathol.* 119:21.
7. Iwata Y, *et al.* 2011. *Blood.* 117:530. [PubMed](#)

**Description:** CD40 is a 48 kD type I glycoprotein also known as BP50. It is a member of the TNFR superfamily primarily expressed on B cells, macrophages, follicular dendritic cells, endothelial cells, fibroblasts, and at low levels on plasma cells. CD40 has been reported to be involved in B cell differentiation, costimulation, isotype class-switching, and protection of B cells from apoptosis. Additionally, CD40 is important for T cell-B cell interactions. The ligand of CD40 is CD154 (CD40 ligand). The HB14 antibody has been reported to promote B cell proliferation in the presence of anti-IgM, IL-4 or PMA, partially block CD40 binding to CD40L and rescue B cells from apoptosis.

- Antigen** 1. Banchereau J, *et al.* 1994. *Annu. Rev. Immunol.* 12:881.
- References:** 2. Foy T, *et al.* 1996. *Annu. Rev. Immunol.* 14:591.