

APC/Fire™ 750 anti-human CD40

Catalog # / Size: 2165110 / 100 tests
2165105 / 25 tests

Clone: HB14

Isotype: Mouse IgG1, κ

Immunogen: Ag8.653 myeloma cells

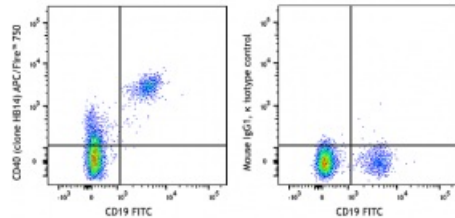
Reactivity: Human, Non-human primate, Other

Preparation: The antibody was purified by affinity chromatography and conjugated with APC/Fire™ 750 under optimal conditions.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA)

Workshop Number: V CD40.5

Concentration: Lot-specific



Human peripheral blood lymphocytes were stained with CD19 FITC and CD40 (clone HB14) APC/Fire™ 750 (left) or mouse IgG1, κ APC/Fire™ 750 isotype control (right).

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 5 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

* APC/Fire™ 750 has a maximum excitation of 650 nm and a maximum emission of 787 nm.

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.¹ 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).⁷ The Ultra-LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. Nos. 313019 & 313020).

- 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.