SONY

# Product Data Sheet

## APC/Fire™ 750 anti-human CD10

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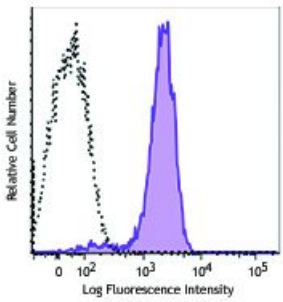
| **Catalog # / Size:** | 2161150 / 100 tests<br>2161145 / 25 tests |
| **Clone:** | HI10a |
| **Isotype:** | Mouse IgG1, κ |
| **Immunogen:** | Human PMN cells |
| **Reactivity:** | Human, Non-human primate, Other |
| **Preparation:** | The antibody was purified by affinity chromatography and conjugated 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 CD10.7 |
| **Concentration:** | Lot-specific |




Human peripheral blood granulocytes were stained with anti-human CD10 (clone HI10a) APC/Fire™ 750 (filled histogram) or mouse IgG1, κ APC/Fire™ 750 isotype control (open histogram).

## Applications:

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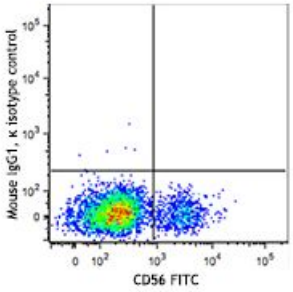
| **Applications:** | Flow Cytometry |
| **Recommended Usage:** | Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.<br><br>* APC/Fire™ 750 has a maximum excitation of 650 nm and a maximum emission of 787 nm. |





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**Application Notes:**

The 3G8 antibody clone blocks neutrophil phagocytosis and stimulates NK cell proliferation. It has been reported that this clone interacts with the FcγRIIa and FcγRIIIb receptors causing neutrophil activation and aggregation[18]. Due to this phenomenon staining in whole blood may cause a reduction in the number of granulocytes or alter their scatter profile.

Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections[6], immunoprecipitation[3], stimulation of NK cell proliferation[4], blocking of phagocytosis[5], and blocking of immunoglobulin binding to FcγRIII[7,8]. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 302049, 302050, 302057, 302058).

**Application References:**


1. Knapp W, *et al.* Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York.
2. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
3. Edberg J, *et al.* 1997. *J. Immunol.* 159:3849. (IP)
4. Hoshino S, *et al.* 1991. *Blood* 78:3232. (Stim)
5. Tamm A, *et al.* 1996. *Immunol.* 157:1576. (Block)
6. Da Silva DM, *et al.* 2001. *Int. Immunol.* 13:633. (IHC)
7. Holl V, *et al.* 2004. *J. Immunol.* 173:6274. (Block)
8. Hober D, *et al.* 2002. *J. Gen. Virol.* 83:2169. (Block)
9. Brainard DM, *et al.* 2009. *J. Virol.* 83:7305. PubMed
10. Smed-Sörensen A, *et al.* 2008. *Blood* 111:5037. (Block) PubMed
11. Timmerman KL, *et al.* 2008. *J. Leukoc. Biol.* 84:1271. (FC) PubMed
12. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
13. Rout N, *et al.* 2010. *PLoS One* 5:e9787. (FC)
14. Kim WK, *et al.* 2006. *Am. J. Pathol.* 168:822. (FC)
15. Boltz A, *et al.* 2011. *J. Biol Chem.* 286:21896. PubMed
16. Wu Z, *et al.* 2013. *J. Virol.* 87:7717. PubMed
17. Peterson VM, *et al.* 2017. *Nat. Biotechnol.* 35:936. (PG)
18. Vossebeld PJ, et al. 1997. *Biochem J.* 323:87-94 (Stim)


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**Description:**

CD10 is a 100 kD neutral endopeptidase and a member of the metalloprotease family. It is a type II transmembrane protein also known as common acute lymphoblastic leukemia antigen (CALLA), enkephalinase, and neprilysin. CD10 is expressed on B cell precursors, T cell precursors, and neutrophils. CD10 is involved in B cell development and has been shown to bind opioid enkephalins, bradykinin, angiotensins I and II, and other biologically active peptides.

**Antigen References:**


1. Shipp M, *et al.* 1993. *Blood* 82:1052.
2. Lu B, *et al.* 1995. *J. Exp. Med.* 181:2271.