

Biotin anti-human CD184 (CXCR4)

Catalog # / Size: 306504 / 100 µg

Clone: 12G5

Isotype: Mouse IgG2a, κ

Workshop Number: VII 70204

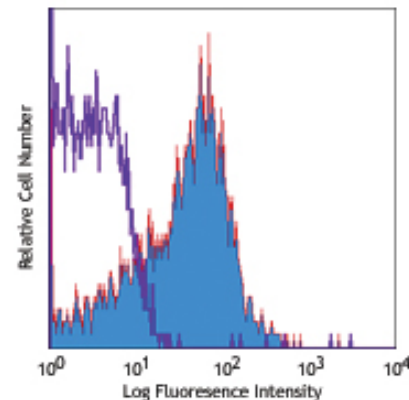
Reactivity: Human, **Cross-Reactivity:** Chimpanzee, Baboon, Cynomolgus, Rhesus, Sooty Mangabey, African Green

Preparation: The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions. The solution is free of unconjugated biotin.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.5 mg/ml

Storage: The antibody solution should be stored undiluted at 4°C. **Do not freeze.**



Human peripheral blood lymphocytes stained with biotinylated 12G5, followed by Sav-PE

Applications:

Applications: FC - Quality tested

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is ≤ 0.5 µg per 10⁶ cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections^{2,3}, immunofluorescence microscopy⁶, and blocking of CD4-independent infection by HIV-2 and CD4-dependent infection by some T cell-tropic isolates of HIV-1^{4,5}. Clone 12G5 may not be suitable for Western blotting.¹⁰ The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 306512).

Application References:

- McKnight A, *et al.* 1997. *J. Virol.* 71:1692.
- Endres MJ, *et al.* 1996. *Cell* 87:745. (IHC)
- Volin MV, *et al.* 1998. *Biochem. Biophys. Res. Commun.* 242:46. (IHC)
- Berndt C, *et al.* 1998. *P. Natl. Acad. Sci. USA* 95:12556. (Block)
- Ullrich CK, *et al.* 2000. *Blood* 96:1438. (Block)
- Murga M, *et al.* 2005. *Blood* 105:1992. (IF)
- Thompson BD. 2007. *J. Biol. Chem.* 282:9547. (FC) PubMed
- Isnardi I, *et al.* 2010. *Blood* 115:5026. PubMed
- Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
- Fischer T, *et al.* 2008. *PLoS One* 3:e4069.

Description: CD184, also known as fusin or CXCR4, is a 45 kD seven transmembrane G-protein-linked CXC chemokine receptor. CD184 is widely expressed on blood and tissue cells, including B and T cells, monocytes, macrophages, dendritic cells, granulocytes, megakaryocytes/platelets, lymphoid, myeloid precursor cells, endothelial cells, epithelial cells, astrocytes, and neurons, among other tissue cells. CD184 is the receptor for CXC chemokine SDF-1, mediates blood cell migration, and is involved in B lymphopoiesis and myelopoiesis, cardiogenesis, blood vessel formation, and cerebellar development. CXCR4 is also a coreceptor of X4 HIV-1 and an alternative receptor for some isolates of HIV-2. The 12G5 antibody has been reported to block CD4-independent infection by HIV-2 and CD4-dependent infection by some T cell-tropic isolates of HIV-1.

Antigen References:

- Berger E, *et al.* 1999. *Annu. Rev. Immunol.* 17:657.
- Loetscher P, *et al.* 2000. *Adv. Immunol.* 74:127.
- Murphy P, *et al.* 2000. *Pharmacol. Rev.* 52:145.

Related Products:

Product	Clone	Application
Biotin Mouse IgG2a, κ Isotype Ctrl	MOPC-173	FC, ICFC
Cell Staining Buffer		FC, ICC, ICFC
RBC Lysis Buffer (10X)		FC, ICFC
Biotin anti-human CD184 (CXCR4)	4G10	FC
Human TruStain FcX™ (Fc Receptor Blocking Solution)		FC, ICC, ICFC



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