

Product Data Sheet

anti-human CCR5 monoclonal antibody

Product information

Catalog Number:	GM-0604
Clone:	NP-6G4
Description:	purified monoclonal mouse antibody
Specificity:	anti-human CCR5
Isotype:	IgG1
Purification:	Protein G
Storage:	short term: 2°C - 8°C; long term: -20°C (avoid repeated freezing and thawing)
Buffer:	phosphate buffered saline, pH 7.2
Immunogen:	genetic immunization with cDNA encoding human CCR5
SwissProt / UniProt	P51681
Selection:	based on recognition of the complete native protein expressed on transfected mammalian cells

Working dilutions

Flow cytometry:	1.2 µg/10 ⁶ cells
CELISA:	1:200 - 1:400
ELISA:	1:200 - 1:400

For each application a titration should be performed to determine the optimal concentration.

Specificity testing by flow cytometry

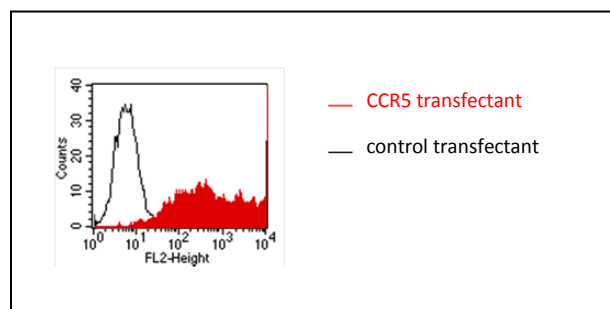


Fig.1: GM-0604. BOSC23 cells were transiently transfected with an expression vector encoding either CCR5 (red curve) or an irrelevant protein (control transfectant). Binding of NP-6G4 was detected with a PE conjugated secondary antibody. A positive signal was obtained only with CCR5 transfected cells.

SDS-PAGE analysis of NP-6G4

The antibody was purified by protein G affinity chromatography from cell culture supernatants and verified by SDS-Page (Fig.2).

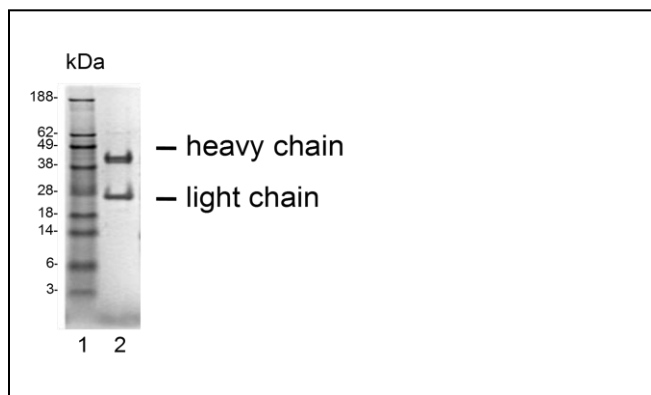


Fig.2: SDS-PAGE analysis of purified NP-6G4 monoclonal antibody. Lane 1: molecular weight marker. Lane 2: 2 µg of purified NP-6G4 antibody. Proteins were separated by SDS-PAGE and stained with RAPID Stain™ Reagent.

Background

CCR5 (*CC chemokine receptor 5*) belongs to the rhodopsin family of G-protein-coupled receptors. Chemokine receptors are membrane-bound molecules composed of 7-transmembrane domains and are coupled to G-proteins (1, 2). CCR5 binds the chemokines MIP-1β, RANTES, MIP-1, and MCP-2 specifically using transfected and peripheral blood mononuclear cells (2, 3). It is highly expressed in lymphoid organs such as the thymus and spleen and in peripheral T lymphocytes and macrophages (4). CCR5 has been shown to be the major coreceptor in association with CD4 for macrophage-tropic HIV-1 entry into permissive cells (5).

References

1. **Samson M, Labbe O, Mollereau C, Vassart G, Parmentier M (1996):** Molecular cloning and functional expression of a new human CC-chemokine receptor gene. *Biochemistry*. 3519963362
2. **Murdoch C and Finn A (2000):** Chemokine receptors and their role in inflammation and infectious diseases. *Blood* 95 (10): 3032-3043
3. **Ruffing N, Sullivan N, Sharmeen L, Sodroski J, Wu L (1998):** CCR5 has an expanded ligand-binding repertoire and is the primary receptor used by MCP-2 on activated T cells. *Cell Immunol*. 1891998160
4. **Raport CJ, Gosling J, Schweickart VL, Gray PW, Charol F (1996):** Molecular cloning and functional characterization of a novel human CC chemokine receptor (CCR5) for RANTES, MIP-1beta, and MIP-1alpha. *J Biol Chem*. 271199617,161
5. **Doranz BJ, Rucker J, Yi Y, Smyth RJ, Samson M, Peiper SC, Parmentier M, Collman RG, Doms RW (1996):** A dual-tropic primary HIV-1 isolate that uses fusin and the beta-chemokine receptors CKR-5, CKR-3, and CKR-2b as fusion cofactors. *Cell*. 8519961149