

CD4 protein-coupled magnetic MicroBeads

Cat. No. CD4-475M **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Human

Capacity for 1×10^9 total cells

Background

CD4 is an accessory molecule in the recognition of MHC class II/peptide complexes by the TCR heterodimers on CD4⁺ T helper cells. CD4 is expressed on T helper cells and at a lower level on monocytes and dendritic cells. The CD4 molecule is the receptor for the human immunodeficiency virus. The CD4 antibody recognizes most thymocytes and about 65% of all peripheral blood T cells.

Application

Isolation or depletion of CD4⁺ T helper cells is performed in many different fields of research, such as infectious diseases, autoimmune diseases, allergy, asthma, and tumor immunology. T helper cells isolated by MACS Technology remain viable and functional. Therefore, they can be used for further functional studies, such as proliferation assays¹⁰ and cytotoxicity assays, as well as for the generation of T cell lines. CD4⁺ T cells purified with CD4 MicroBeads have also been cultured and analyzed for in vitro cytokine production. Furthermore, they have been used in co-culture experiments, e.g., for allogeneic stimulation by dendritic cells¹ or for B cell activation.

T helper cells isolated by MACS Technology were also used for studies on viral infections, e.g., for in vitro infections of cells with HIV5, to determine the infectivity of HIV-infected follicular dendritic cells, immune reconstitution after anti-viral therapy, and for monitoring of immune abnormalities in children of HIV-infected mothers.

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