

Catalog Number: MG-1229FITC

Basic Information

Catalog Number:
MG-1229FITC**Applications:**
FC**Host:**
Alpaca**Conjugate:**
FITC Plus**Type:**

Nanobody

Class:

Recombinant

RRID:

/

Molecular Weight:

14.8 kDa

Description

The small size of VHHs (~15 kDa) enables access to epitopes that may be sterically inaccessible to full size IgGs. Their reduced steric hindrance also facilitates simultaneous staining of multiple targets, making them particularly useful for applications like Nano-Flow. MG-1229FITC is a recombinant FITC conjugated anti CD4 Nanobody (VHH) that targets CD4 (human).

Affinity

17 nM

Excitation/Emission Maxima Wavelengths

500 nm / 520 nm

Background

CD4 is a 55-kDa transmembrane glycoprotein expressed on T helper cells, majority of thymocytes, monocytes, macrophages, and dendritic cells (PMID: 9304802; 12213222). CD4 is an accessory protein for MHC class-II antigen/T-cell receptor interaction. It plays an important role in T helper cell development and activation (PMID: 9539765; 3112582). CD4 serves as a receptor for the human immunodeficiency virus (HIV) (PMID: 9304802).

Storage

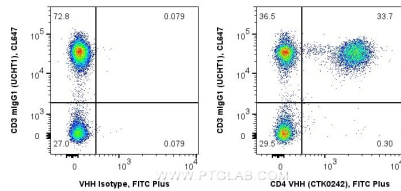
Storage:

Store at -20°C

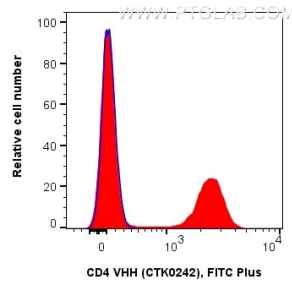
Storage Buffer:

10 mM HEPES pH 7.0, 500 mM NaCl, 5 mM EDTA, 0.09% sodium azide

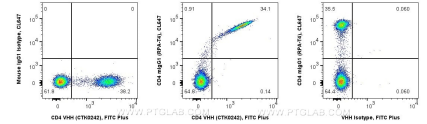
Selected Validation Data



Human PBMCs co-stained with anti-CD4 recombinant VHH and anti-CD3 UCHT1 in Flow Cytometry. 1×10^6 human PBMCs were surface co-stained in 100 μ L with 0.25 μ g anti-CD4 recombinant VHH, FITC Plus (MG-1229FITC, Clone: CTK0242) or 0.25 μ g recombinant VHH Isotype Control, FITC Plus (Clone: CTK0201), mixed with 5 μ L Anti-Human CD3, CoraLite® Plus 647 (CL647-65151, Clone: UCHT1). Fc-receptors were blocked. Viability Dye (PD00002) was used. Cells were not fixed. Viable lymphocytes were gated.



Human PBMCs stained with anti-CD4 recombinant VHH in Flow Cytometry. 1×10^6 human PBMCs were surface stained in 100 μ L with 0.25 μ g anti-CD4 recombinant VHH, FITC Plus (MG-1229FITC, Clone: CTK0242) (red), or 0.25 μ g recombinant VHH Isotype Control, FITC Plus (Clone: CTK0201, blue). Fc-receptors were blocked. Viability Dye (PD00002) was used. Cells were not fixed. Viable lymphocytes were gated.



Human PBMCs competitively co-stained with anti-CD4 recombinant VHH and anti-CD4 RPA-T4 in Flow Cytometry. 1×10^6 human PBMCs were surface co-stained in 100 μ L with 0.25 μ g anti-CD4 recombinant VHH, FITC Plus (MG-1229FITC, Clone: CTK0242) mixed with 5 μ L Anti-Human CD4, CoraLite® Plus 647 (CL647-65143, Clone: RPA-T4) (middle). As controls 0.25 μ g VHH were co-stained with 0.25 μ g Mouse IgG1, κ Isotype Control, CoraLite® Plus 647 (CL647-65124, Clone: MOPC-21) (left), and 5 μ L RPA-T4 were co-stained with 0.25 μ g recombinant VHH Isotype Control, FITC Plus (Clone: CTK0201, right). Fc-receptors were blocked. Viability Dye (PD00002) was used. Cells were not fixed. Viable lymphocytes were gated. Anti-Human CD4 recombinant VHH clone CTK0242 effectively co-stains the same CD4+ population as the conventional Anti-Human CD4 Mouse IgG1 clone RPA-T4.