Human CD4 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2992A
Catalog Number: MAB11560

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human CD4 in Direct ELISA.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2992A
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary cell line, CHO-derived human CD4 Lys26-Trp390 Accession # P01730
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunocytochemistry	1-25 µg/mL	fixed hPBMC cells (Positive) and absent in MCF-7 human breast cancer cell line (Negative)
Multiplex Immunofluorescence	20 µg/mL	Immersion fixed paraffin embedded sections of human tonsil
Immunohistochemistry	1-25 µg/mL	Immersion fixed paraffin-embedded sections of human tonsil

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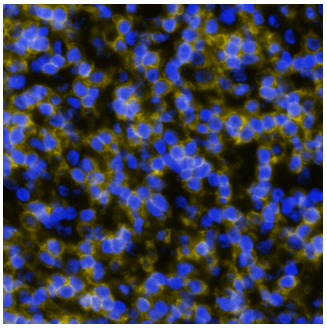
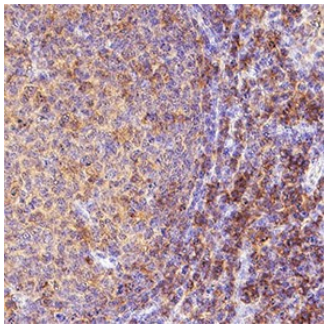
DATA

Multiplex Immunofluorescence



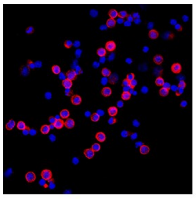
Detection of CD4 in Human Tonsil via Multiplex Immunofluorescence staining on COMET™ CD4 was detected in immersion fixed paraffin-embedded sections of human tonsil using Rabbit Anti-Human CD4 Monoclonal Antibody (Catalog # MAB11560) at 20µg/mL at 37 ° Celsius for 8 minutes. Before incubation with the primary antibody, tissue underwent an all-in-one dewaxing and antigen retrieval preprocessing using PreTreatment Module (PT Module) and Dewax and HIER Buffer H (pH 9). Tissue was stained using the Alexa Fluor™ Plus 647 Goat anti-Rabbit IgG Secondary Antibody at 1:200 at 37 ° Celsius for 2 minutes. (Yellow; Lunaphore Catalog # DR647RB) and counterstained with DAPI (blue; Lunaphore Catalog # DR100).Specific staining was localized to the membrane. Protocol available in COMET™ Panel Builder.

Immunohistochemistry

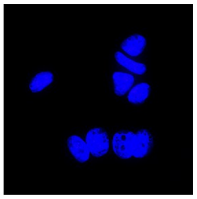


Detection of CD4 in Human Tonsil. CD4 was detected in immersion fixed paraffin-embedded sections of human tonsil using Rabbit Anti-Human CD4 Monoclonal Antibody (Catalog # MAB11560) at 1 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003) or the HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm and membrane. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Immunocytochemistry/ Immunofluorescence



hPBMC (Positive) cells



MCF-7 (Negative) cells

Detection of CD4 in hPBMC cells (Positive) and MCF-7 cells (Negative). CD4 was detected in fixed hPBMC cells (Positive) and absent in MCF-7 human breast cancer cell line (Negative) using Rabbit Anti-Human CD4 Monoclonal Antibody (Catalog # MAB11560) at 3 µg/ml for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to the membrane. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD4 is an approximately 55 kDa type I membrane glycoprotein that is expressed predominantly on most thymocytes and a subset of mature T lymphocytes. In humans, CD4 is also expressed to a lesser extent on monocytes and macrophage related cells. Human CD4 cDNA encodes a 458 amino acid (aa) precursor protein with a 25 aa signal peptide, a 371 aa extracellular region containing four immunoglobulin homology domains, a 24 aa transmembrane domain and a 38 aa cytoplasmic domain. CD4 is a coreceptor required for T cell recognition of antigens that are presented by class II major histocompatibility complexes. CD4 has been shown to be a coreceptor of HIV entry and specifically binds gp120, the external envelope glycoprotein of HIV.

References:

1. Capon, D.I. *et al.* (1991) Annu. Rev. Immunol. **9**:649.

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