

PRODUCT INFORMATION



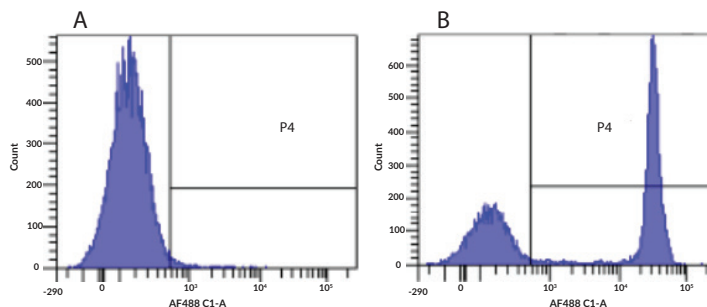
CD4 Chimeric Monoclonal Antibody (Clone YNB46.1.8)

Item No. 37161

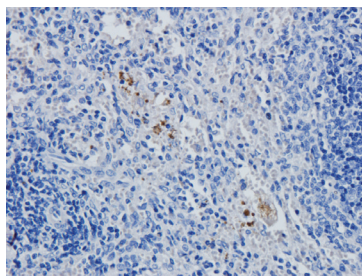
Overview and Properties

Contents:	This vial contains 200 µg of protein A-affinity purified monoclonal antibody.
Synonyms:	Cluster of Differentiation 4, T Cell Surface Antigen T4, T Cell Surface Glycoprotein CD4
Immunogen:	Recombinant human CD4
Cross Reactivity:	(+) CD4
Species Reactivity:	(+) Human and rabbit; other species not tested
Uniprot No.:	P01730
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 0.02% ProClin™ 300
Concentration:	1 mg/ml
Clone:	YNB46.1.8 (Campath-9H)
Host:	This antibody is composed of a fusion of the antigen binding region of rat anti-CD4 monoclonal antibody (clone YNB46.1.8) with the constant domain of rabbit IgG1k
Isotype:	IgGk
Applications:	Flow Cytometry (FC), Immunohistochemistry; frozen (IHC; frozen), and Western blot (WB); The optimal working concentration/dilution should be determined empirically.

Images



Flow-cytometric analysis using CD4 Chimeric Monoclonal Antibody (Clone YNB46.1.8). Human lymphocytes were stained with an isotype control (panel A) or CD4 Chimeric Monoclonal Antibody (Clone YNB46.1.8) (panel B) at a concentration of 1 µg/ml for 30 min. at RT. After washing, bound antibody was detected using an AF488-conjugated donkey anti-rabbit antibody and cells analyzed on a FACSCanto™ flow cytometer.



Immunohistochemical (IHC) staining of formaldehyde-fixed paraffin embedded rabbit spleen slices using CD4 Chimeric Monoclonal Antibody (Clone YNB46.1.8) at 5 µg/ml.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

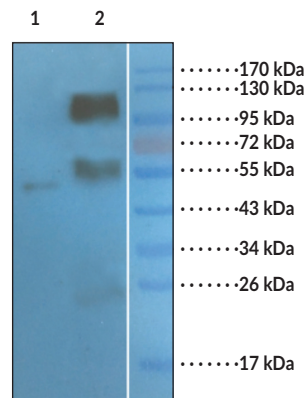
SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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Lane 1: Mouse thymus
Lane 2: Mouse spleen

WB using CD4 Chimeric Monoclonal Antibody (Clone YNB46.1.8). Samples were resolved on a 10% SDS-PAGE gel and blots probed at 1.5 µg/ml before being detected by a secondary antibody.

Description

CD4 is a type I transmembrane glycoprotein that functions as a T cell receptor (TCR) co-receptor.¹ It exists as a single polypeptide chain composed of four extracellular immunoglobulin-like (Ig-like) domains that interact with MHC class II molecules, a transmembrane domain, and a cytoplasmic tail that associates with the tyrosine kinase LCK and mediates signal transduction to the TCR, which is essential for T cell activation.² It is expressed on the surface of, and used as a marker for, T cells, and its expression is used to characterize the development stage of thymocytes. Upon binding to antigen-presenting MHC class II molecules expressed by antigen-presenting cells (APCs), naïve CD4⁺ T cells differentiate and proliferate in a cytokine-dependent manner into a variety of T helper (Th) cell subsets, including Th1, Th2, and Th17 cells, which enhance and direct innate and adaptive immune cell responses to numerous pathogens and have additional roles in cancer, asthma and allergy, and autoimmunity.^{3,4} CD4 is also the receptor for HIV attachment and entry into cells, resulting in depletion of CD4⁺ cells in patients infected with HIV.^{5,6} Cayman's CD4 Chimeric Monoclonal Antibody (Clone YNB46.1.8) was produced recombinantly from the original humanized YNB46.1.8 antibody and can be used for flow cytometry (FC), immunohistochemistry; frozen (IHC; frozen), and Western Blot (WB) applications.^{7,8} It is composed of rabbit IgG1k constant domains fused to the antigen-binding domain of a rat anti-CD4 monoclonal antibody.

References

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