CD4 Antibody [clone GK1.5] (V8352)

Catalog No.	Formulation	Size
V8352-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8352-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8352SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Mouse
Format	Purified
Host	Rat
Clonality	Monoclonal (rat origin)
Isotype	Rat IgG2b, kappa
Clone Name	GK1.5
Purity	Protein G affinity chromatography
UniProt	P06332
Localization	Cell surface
Applications	ELISA (order BSA-free Format For Coating & Azide) : Neutralization Studies (order BSA/azide-free Format) : Flow Cytometry : 1-2ug/10^6 cells in 0.1ml Immunofluorescence : 1-2ug/ml
Limitations	This CD4 antibody is available for research use only.

Description

CD4 antibody detects CD4, a surface glycoprotein encoded by the CD4 gene. CD4 is expressed on helper T cells, monocytes, macrophages, and dendritic cells, where it functions as a coreceptor in antigen recognition. CD4 binds to non-polymorphic regions of MHC class II molecules, stabilizing interactions between the T-cell receptor and antigen-MHC complexes. Because CD4 is essential for T-cell activation and immune regulation, CD4 antibody is a cornerstone reagent in immunology, oncology, and infectious disease research.

CD4 is a 55 kDa type I transmembrane protein with four extracellular immunoglobulin-like domains, a transmembrane segment, and a cytoplasmic tail containing signaling motifs. It associates with the tyrosine kinase Lck, bringing it into proximity with the CD3 complex during antigen recognition. This interaction amplifies T-cell receptor signaling, supporting proliferation and cytokine production. CD4 is also the primary receptor for HIV, making it a central focus in virology.

The CD4 antibody clone GK1.5 provides specific and reproducible detection. Clone GK1.5 has been extensively referenced in peer-reviewed studies of T-cell biology, immune tolerance, and infection models. In addition to detection, it has been used functionally to deplete CD4+ T cells in experimental animals, providing insights into helper T-cell contributions to immune responses. Its versatility supports applications in flow cytometry, immunohistochemistry, and functional assays.

Research using clone GK1.5 has shown how CD4 is indispensable in shaping adaptive immunity, regulating both humoral and cell-mediated responses. In oncology, CD4 detection supports studies of tumor immunology and the role of helper T cells in anti-tumor activity. In infectious disease research, clone GK1.5 has been central to studies of HIV pathogenesis and vaccine development. Its reproducibility makes it a standard antibody in immunology laboratories worldwide.

NSJ Bioreagents provides this CD4 antibody to support immunology, oncology, and infectious disease studies. Alternate designations include T-cell surface glycoprotein CD4 antibody, L3T4 antigen antibody, helper T-cell marker antibody, HIV receptor antibody, MHC class II coreceptor antibody, and CD4 molecule antibody.

Application Notes

Optimal dilution of the CD4 antibody should be determined by the researcher.

Immunogen

Mouse CTL clone V4 was used as the immunogen for the CD4 antibody.

Storage

Store the CD4 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).