

Rabbit Anti-CD4 antibody

SL0647R

Product Name CD4

Chinese Name CD4 抗体

Alias

CD4 (L3T4); CD4 antigen (p55); CD4 Antigen ; CD4 molecule; CD4 Receptor; CD4+ Lymphocyte deficiency, included; CD4mut; L3T4; Leu3; Ly-4; Lymphocyte antigen CD4; MGC165891; p55; T Cell Antigen T4 ; T cell antigen T4/LEU3; T cell differentiation antigen L3T4; T cell OKT4 deficiency, included; T cell surface antigen T4/Leu 3 ; T cell surface antigen T4/Leu3; T Cell Surface Glycoprotein CD4; W3/25; W3/25 antigen; T-cell surface glycoprotein CD4 isoform 1 precursor; CD4_HUMAN.

Research Area

Tumour Cell biology immunology Stem cells transcriptional regulatory factor Cell Surface Molecule t-lymphocyte

Immunogen Species

Rabbit

Clonality

Polyclonal

React Species

Human,Mouse,Pig(predicted:Rat,Dog,Cow,Sheep,GuineaPig,MACFA)

Applications

WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1µg/Test
(Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight

48kDa

Cellular localization

The cell membrane

Form

Liquid

Concentration

1mg/ml

immunogen

KLH conjugated synthetic peptide derived from human CD4: 385-457/457 <Cytoplasmic>

Lsotype

IgG

Purification

affinity purified by Protein A

Buffer Solution

Human,Mouse,Pig(predicted:Rat,Dog,Cow,Sheep,GuineaPig,MACFA)1M TBS(pH7.4) with 1% BSA, Human,Mouse,Pig(predicted:Rat,Dog,Cow,Sheep,GuineaPig,MACFA)3% Proclin300 and 50% Glycerol.

Storage

Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

[PubMed](#)

This gene encodes a membrane glycoprotein of T lymphocytes that interacts with major histocompatibility complex class II antigens and is also a receptor for the human immunodeficiency virus. This gene is expressed not only in T lymphocytes, but also in B cells, macrophages, and granulocytes. It is also expressed in specific regions of the brain. The protein functions to initiate or augment the early phase of T-cell activation, and may function as an important mediator of indirect neuronal damage in infectious and immune-mediated diseases of the central nervous system. Multiple alternatively spliced transcript variants encoding different isoforms have been identified in this gene. [provided by RefSeq, Aug 2010].

Function:

Accessory protein for MHC class-II antigen/T-cell receptor interaction. May regulate T-cell activation. Induces the aggregation of lipid rafts.

Subunit:

Associates with LCK. Binds to HIV-1 gp120 and to P4HB/PDI and upon HIV-1 binding to the cell membrane, is part of P4HB/PDI-CD4-CXCR4-gp120 complex. Interacts with HIV-1 Envelope polyprotein gp160 and protein Vpu. Interacts with Human Herpes virus 7 capsid proteins. Interacts with PTK2/FAK1; this interaction requires the presence of HIV-1 gp120.

**Product
Detail**

Subcellular Location:

Cell membrane; Single-pass type I membrane protein. Note=Localizes to lipid rafts. Removed from plasma membrane by HIV-1 Nef protein that increases clathrin-dependent endocytosis of this antigen to target it to lysosomal degradation. Cell surface expression is also down-modulated by HIV-1 Envelope polyprotein gp160 that interacts with, and sequesters CD4 in the endoplasmic reticulum.

Post-translational modifications:

Palmitoylation and association with LCK contribute to the enrichment of CD4 in lipid rafts.

Similarity:

Contains 3 Ig-like C2-type (immunoglobulin-like) domains.

Contains 1 Ig-like V-type (immunoglobulin-like) domain.

SWISS:

P01730

Gene ID:

920

Database links:

[Entrez Gene: 920](#) Human

[Entrez Gene: 12504](#) Mouse

[Omim: 186940](#) Human

[SwissProt: P06332](#) Mouse

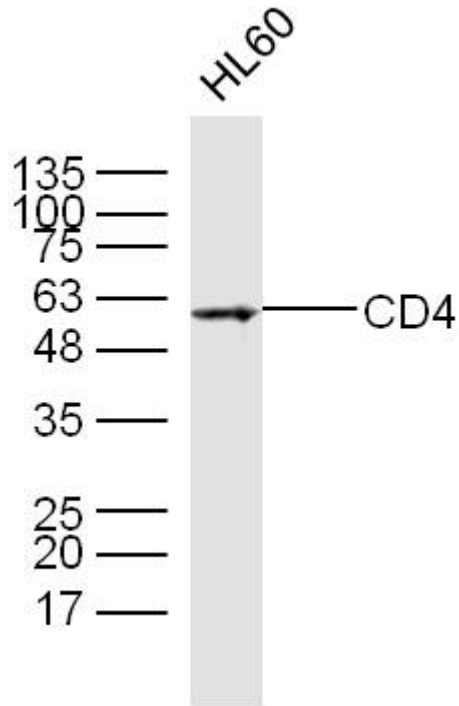
[SwissProt: P01730](#) Human

[Unigene: 631659](#) Human

[Unigene: 2209](#) Mouse

此抗体可识别 55KDI型单链穿膜 glycoprotein。CD4 分子是存在于大多数辅助/诱导 T 细胞表面的 59kDa 的 glycoprotein。正常淋巴组织中 CD4 的表达数量多于 CD8，此抗体主要用于标记辅助/诱导 T 细胞，与 CD8 单抗联合使用对外周血 lymphocyte 分型。CD4 抗原是 HLA-II 类分子和人类免疫缺陷病毒(HIV)-爱滋病的受体，在 35-50% 外周血 lymphocyte-辅助和诱导 T 细胞(Th/Ti)和 70-80%人胸腺细胞上表达，在人的单核细胞表面也有低密度的表达。CD4 抗原有膜结合型和可溶性两种形式。Th/Ti 可辅助 Ig 产生和 T 细胞毒 T 细胞的作用。

**Product
Picture**



Sample:

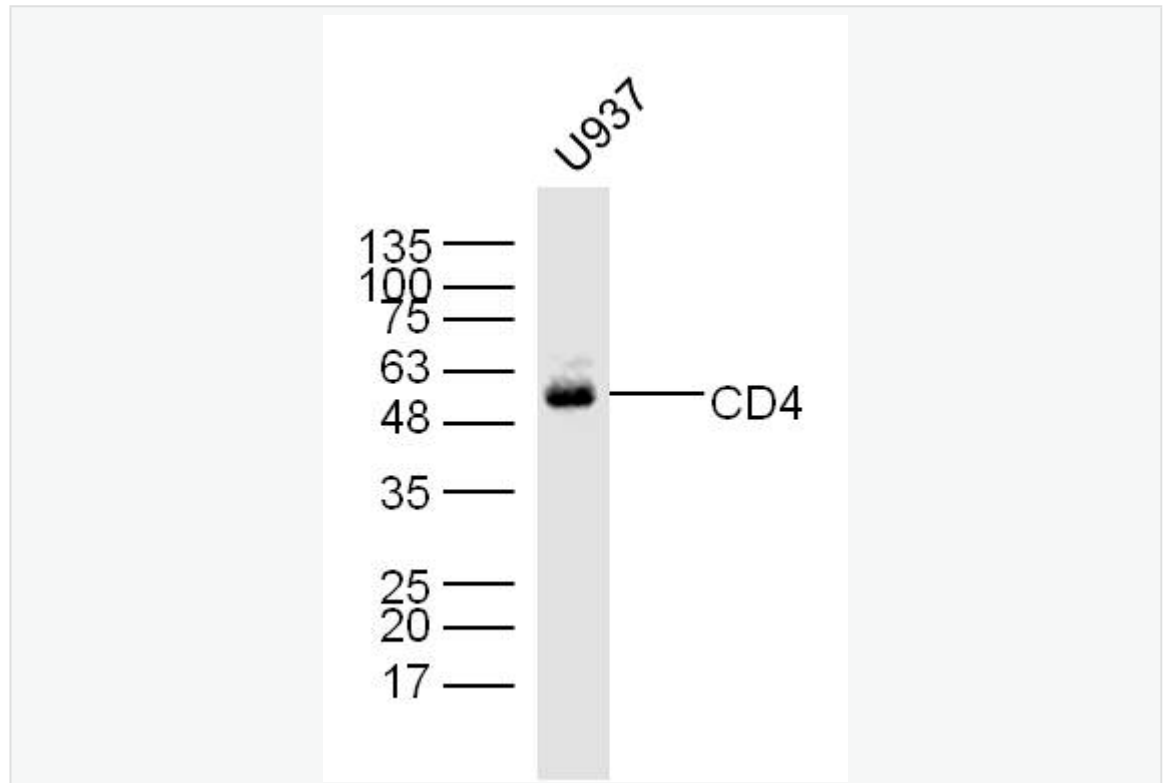
HL60 Cell Lysate at 40 ug

Primary: Anti- CD4 (SL0647R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 48 kD

Observed band size: 55kD



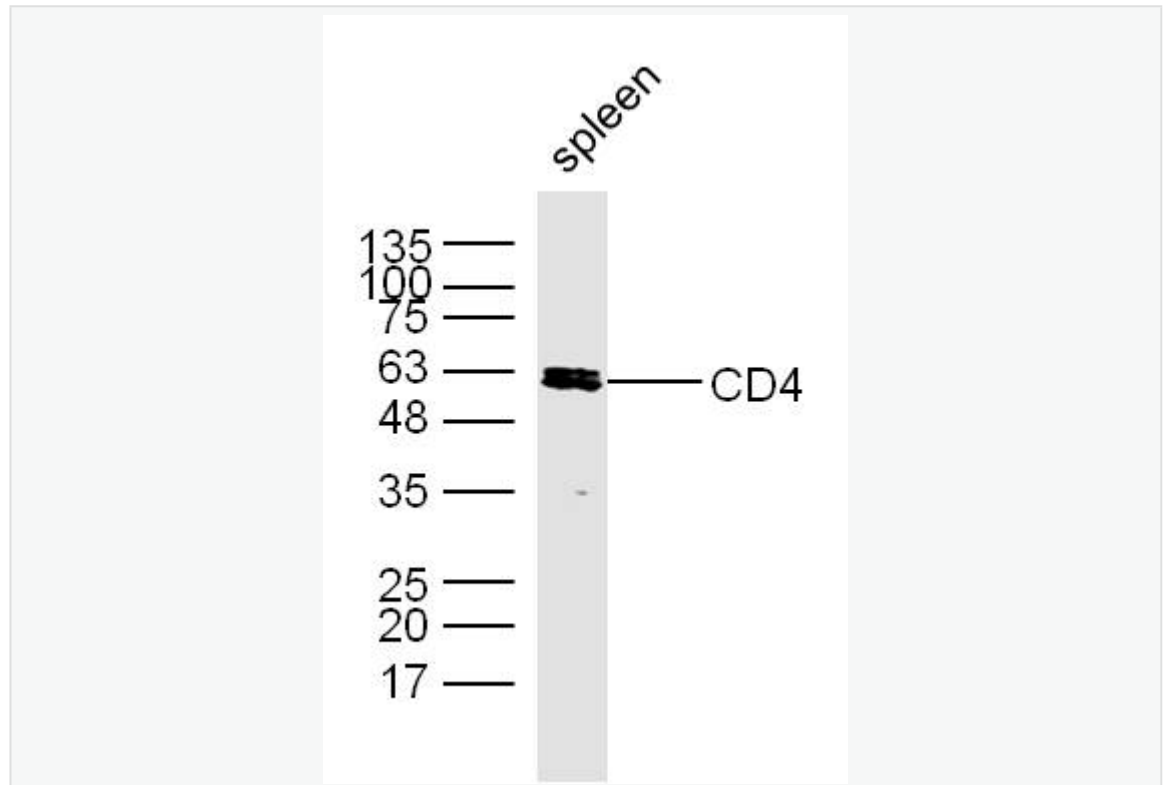
U937 Cell Lysate at 40 ug

Primary: Anti- CD4 (SL0647R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 48 kD

Observed band size: 55kD



Sample:

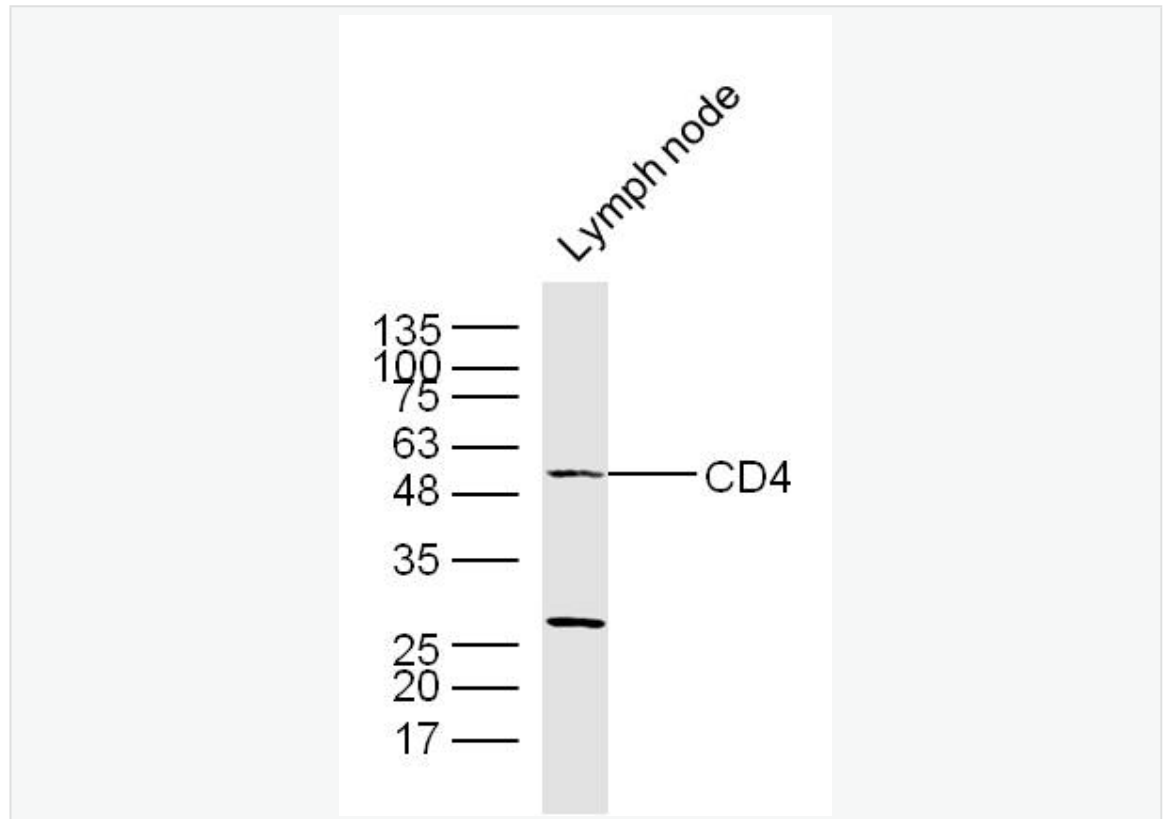
Spleen (Mouse) Lysate at 40 ug

Primary: Anti- CD4 (SL0647R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 48 kD

Observed band size: 55kD



Sample:

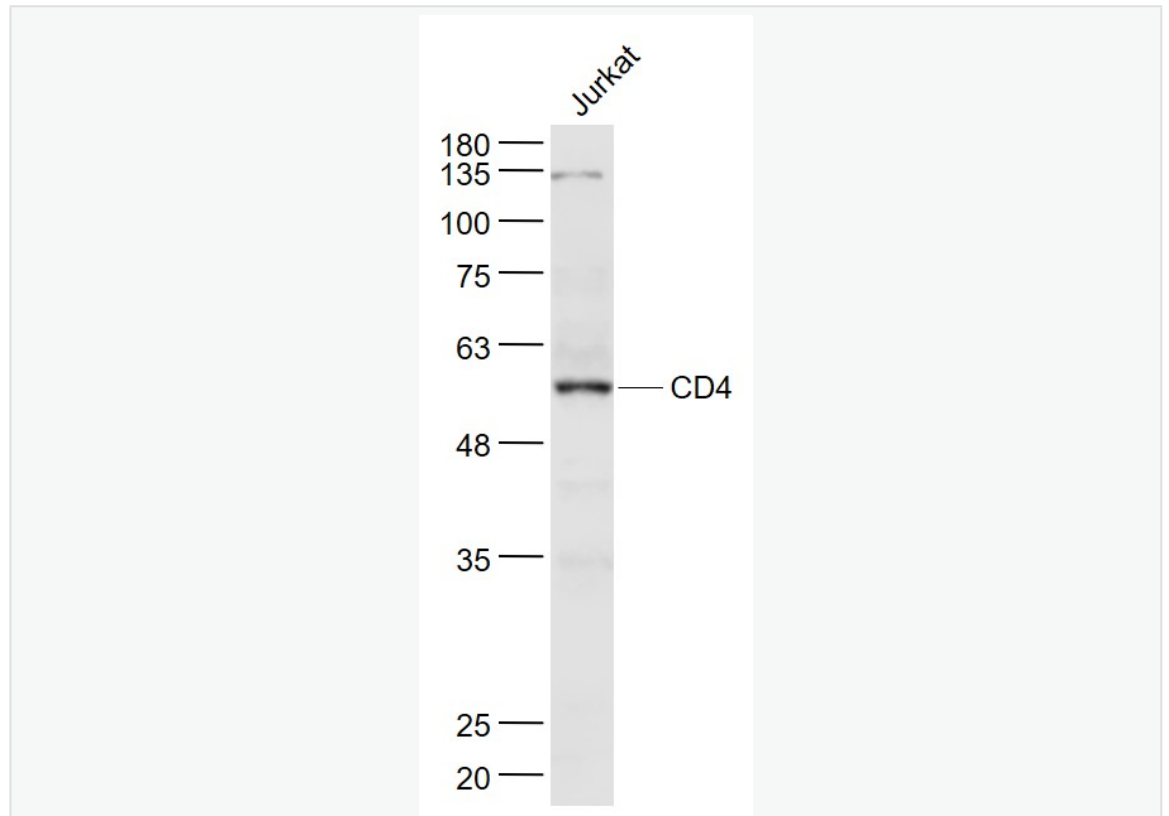
Lymph node(Mouse) Lysate at 40 ug

Primary: Anti- CD4 (SL0647R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 48 kD

Observed band size: 55kD



Sample:

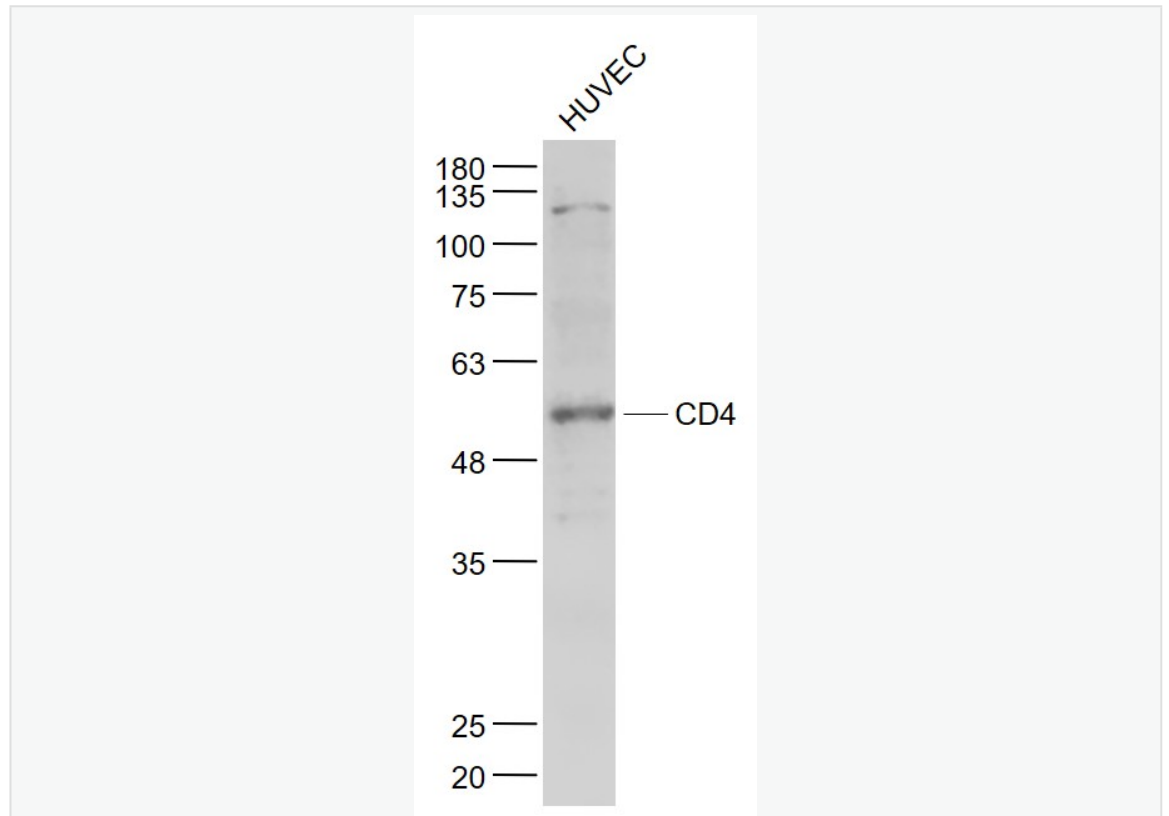
Jurkat(Human) Cell Lysate at 30 ug

Primary: Anti- CD4 (SL0647R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 48 kD

Observed band size: 55 kD



Sample:

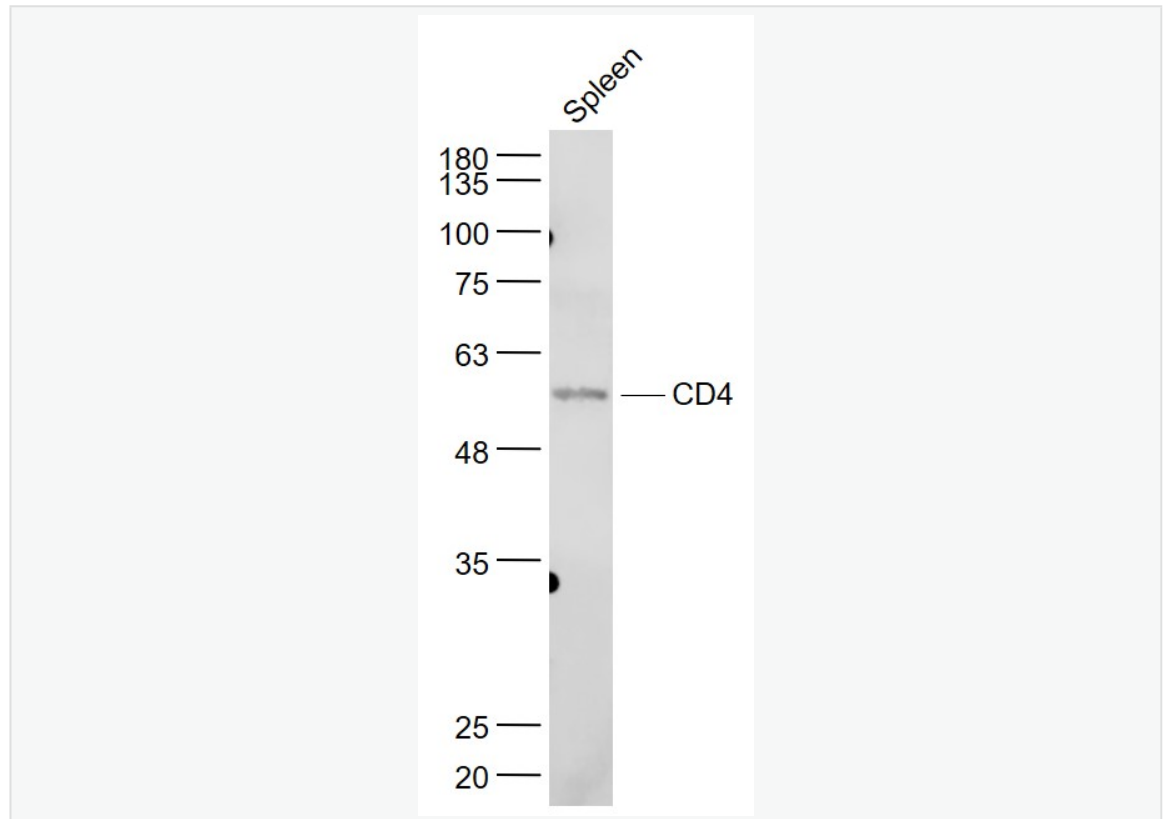
HUVEC(Human) Cell Lysate at 30 ug

Primary: Anti- CD4 (SL0647R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 48 kD

Observed band size: 55 kD



Sample:

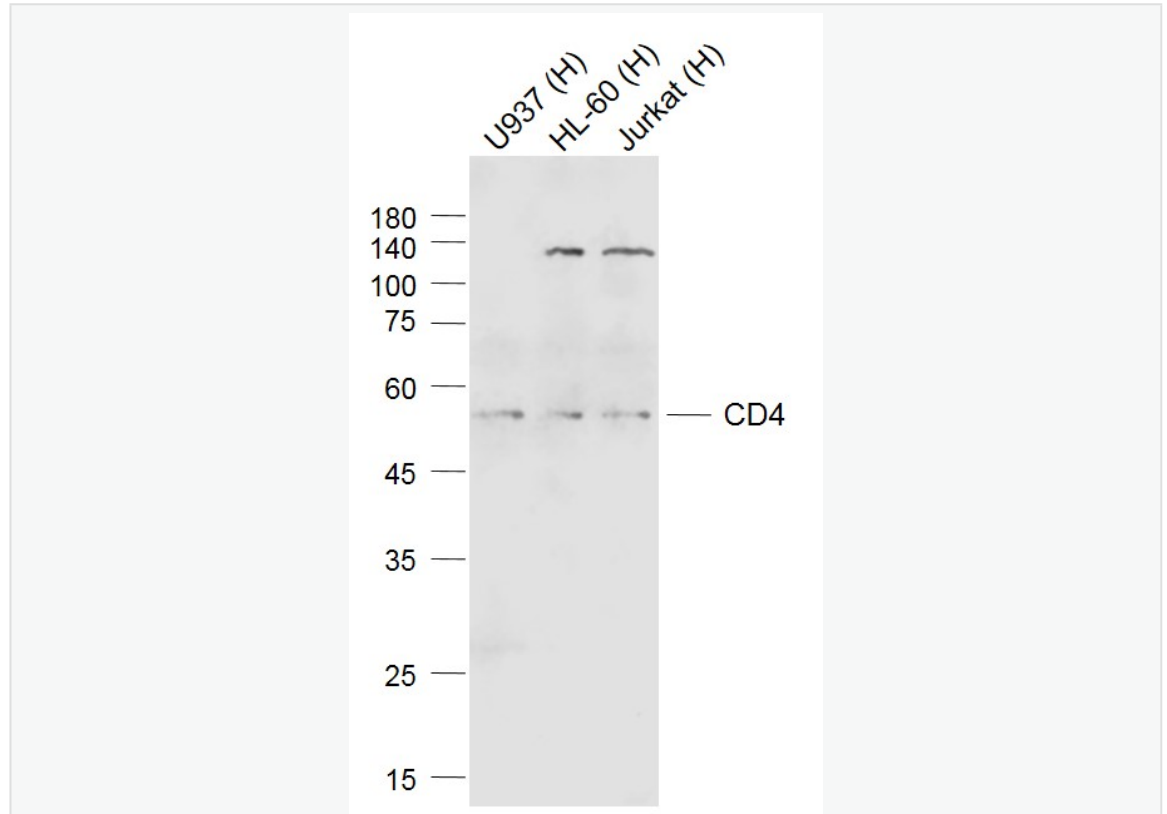
Spleen (Mouse) Lysate at 40 ug

Primary: Anti- CD4 (SL0647R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 48 kD

Observed band size: 55 kD



Sample:

Lane 1: U937 (Human) Cell Lysate at 30 ug

Lane 2: HL-60 (Human) Cell Lysate at 30 ug

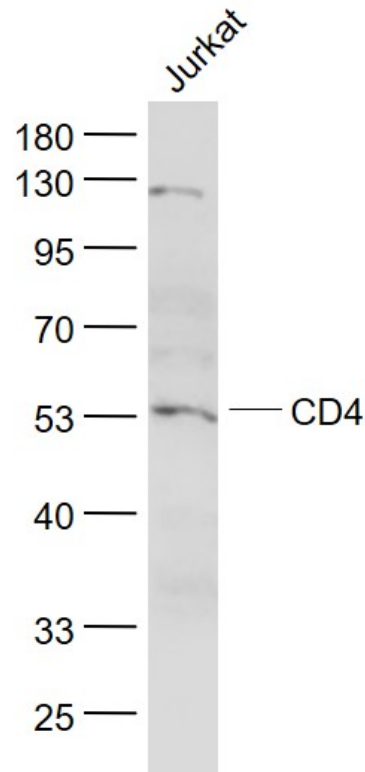
Lane 3: Jurkat (Human) Cell Lysate at 30 ug

Primary: Anti-CD4 (SL0647R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 55 kD

Observed band size: 55 kD



Sample:

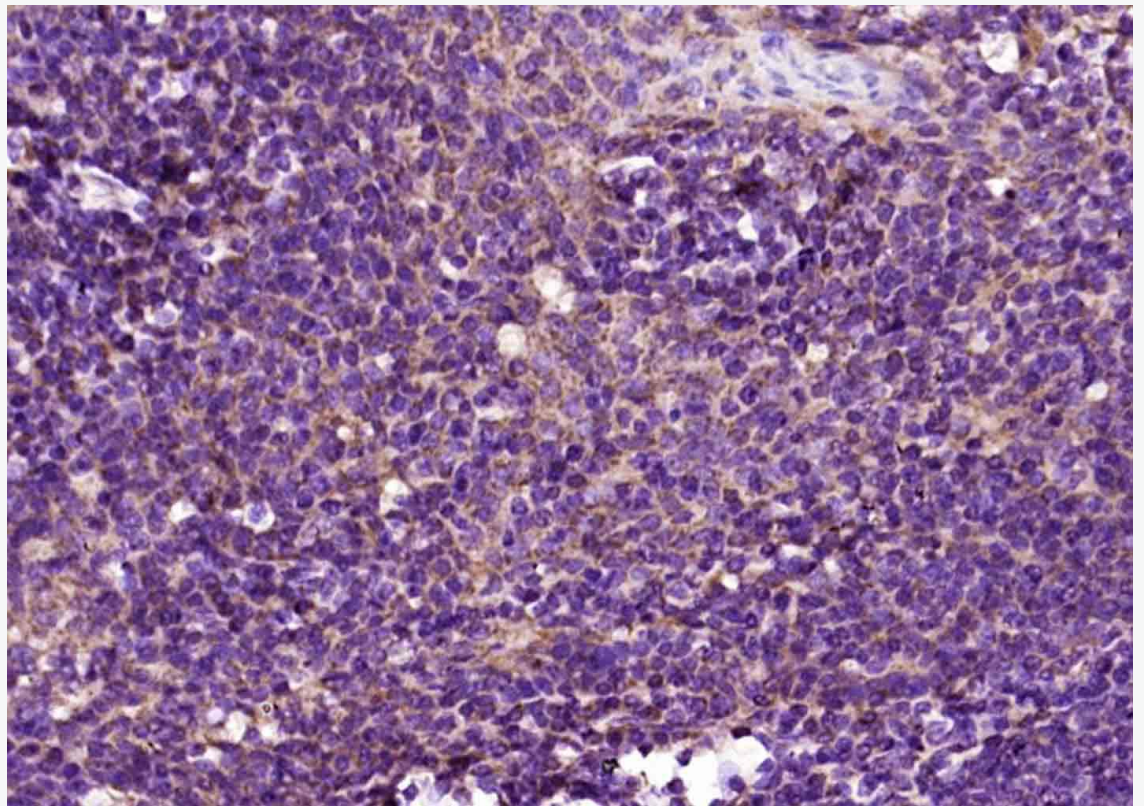
Jurkat(Human) Cell Lysate at 30 ug

Primary: Anti- CD4 (SL0647R) at 1/1000 dilution

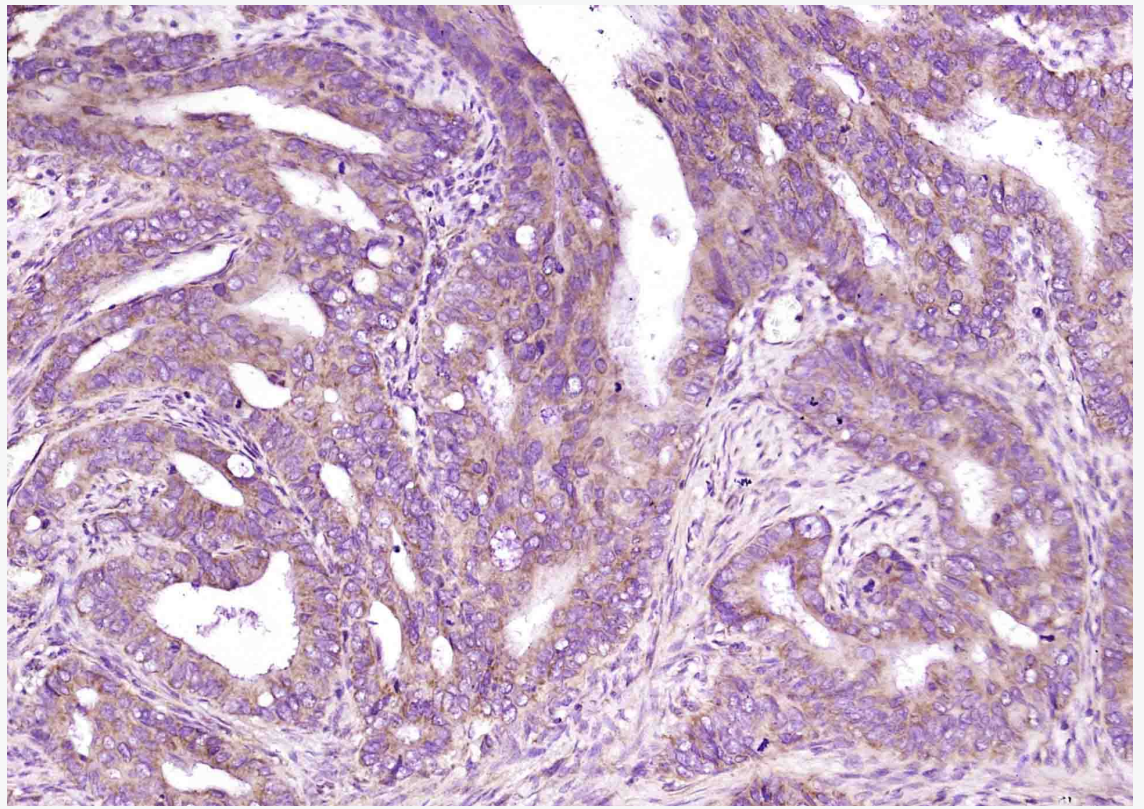
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 48 kD

Observed band size: 53 kD



Paraformaldehyde-fixed, paraffin embedded (human tonsil); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CD4) Polyclonal Antibody, Unconjugated (SL0647R) at 1:4000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (human colon carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CD4) Polyclonal Antibody, Unconjugated (SL0647R) at 1:4000 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

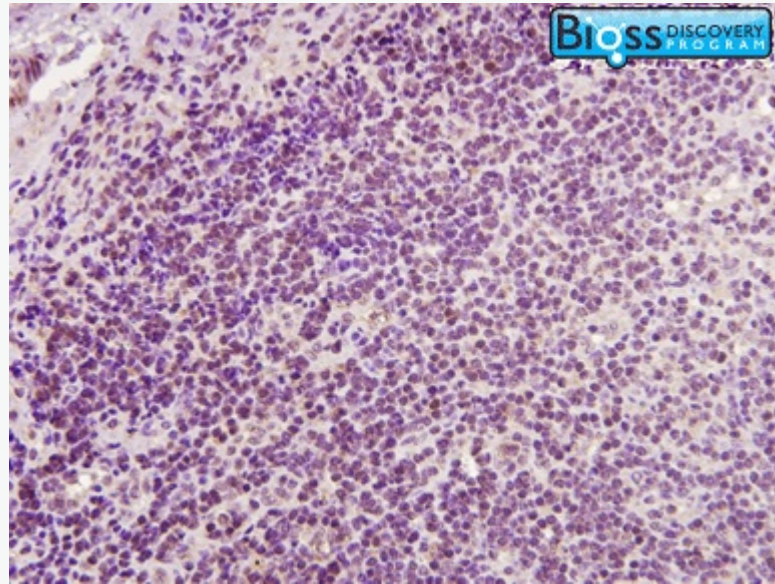
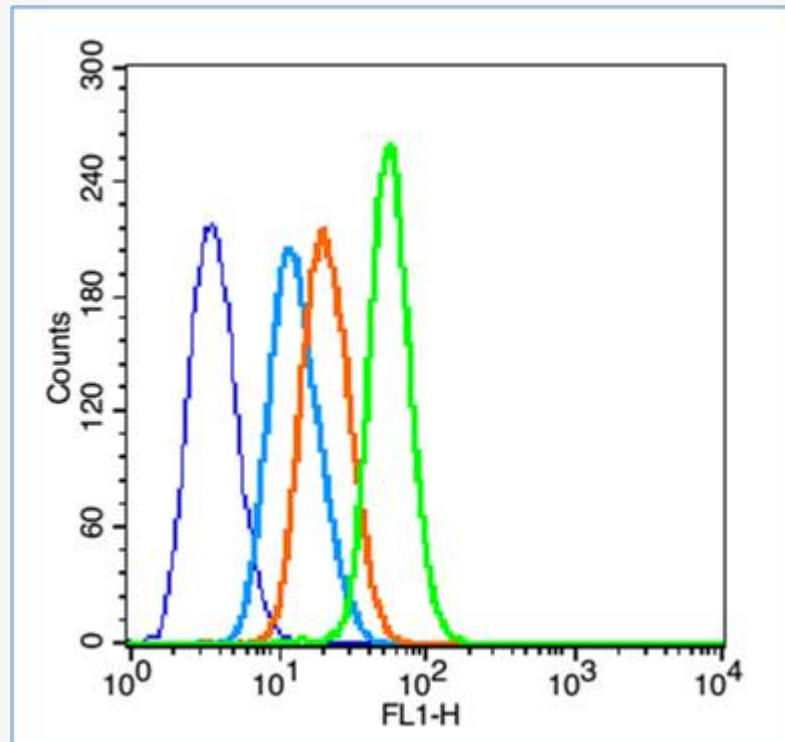


Image was kindly submitted by Dr.David M Burmeister from US Army Institute of Surgical Research. Pig lymph nodes stained with Rabbit Anti-CD4 Polyclonal Antibody(SLSL0647R)at 1:300 for one hour at room temperature.



Blank control (blue line): HL60 (fixed with 2% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min at room temperature).

Primary Antibody (green line): Rabbit Anti-CD4 antibody (SL0647R), Dilution: 1 μ g /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC, dilution: 1 μ g /test.