

Rabbit Anti-CD4 antibody

SL0766R

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_MOUSE.

Research Area

Cell biology immunology Stem cells Cell Surface Molecule lymphocyte t-lymphocyte

Immunogen Species

Rabbit

Clonality

Polyclonal

React Species

Human, Mouse, Rat,

Applications

WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (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

Detection molecular weight

55 kDa

Cellular localization

The cell membrane

Form

Liquid

Concentration 1mg/ml

immunogen

KLH conjugated synthetic peptide derived from the middle of mouse CD4: 231-330/457 <Extracellular>

Lsotype

IgG

Purification

affinity purified by Protein A

**Buffer Solution**

1M TBS(pH7.4) with 1% BSA, 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 the CD4 membrane glycoprotein of T lymphocytes. The CD4 antigen acts as a coreceptor with the T-cell receptor on the T lymphocyte to recognize antigens displayed by an antigen presenting cell in the context of class II MHC molecules. The CD4 antigen is also a primary receptor for entry of the human immunodeficiency virus through interactions with the HIV Env gp120 subunit. This gene is expressed not only in T lymphocytes, but also in B cells, macrophages, granulocytes, as well as in various 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, May 2020]

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:
P06332

Gene ID:
12504

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

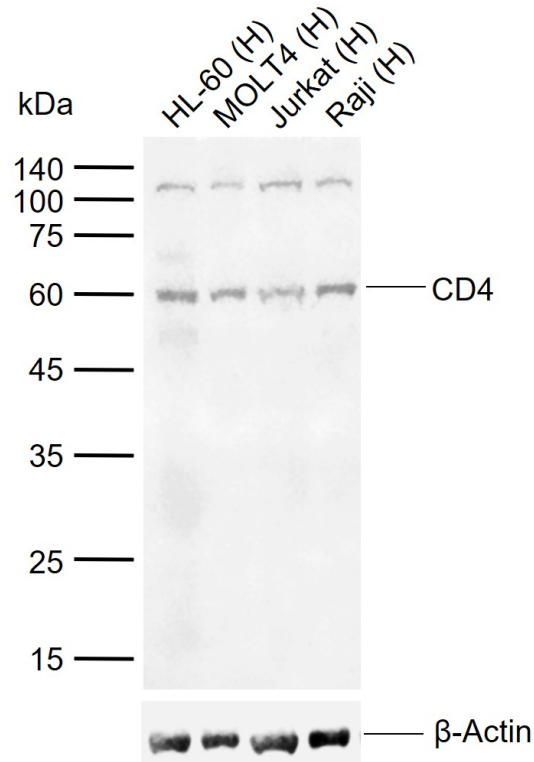
此抗体可识别 55KDI型单链穿膜 glycoprotein。

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:

Lane 1: Human HL-60 cell lysates

Lane 2: Human MOLT4 cell lysates

Lane 3: Human Jurkat cell lysates

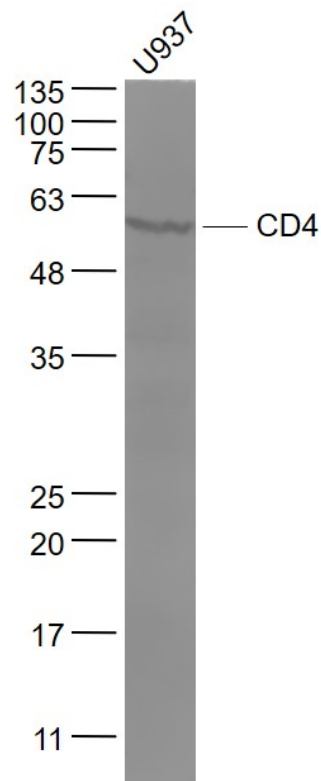
Lane 4: Human Raji cell lysates

Primary: Anti-CD4 (SL0766R) at 1/1000 dilution

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

Predicted band size: 48 kDa

> Observed band size: 60 kDa



Sample:

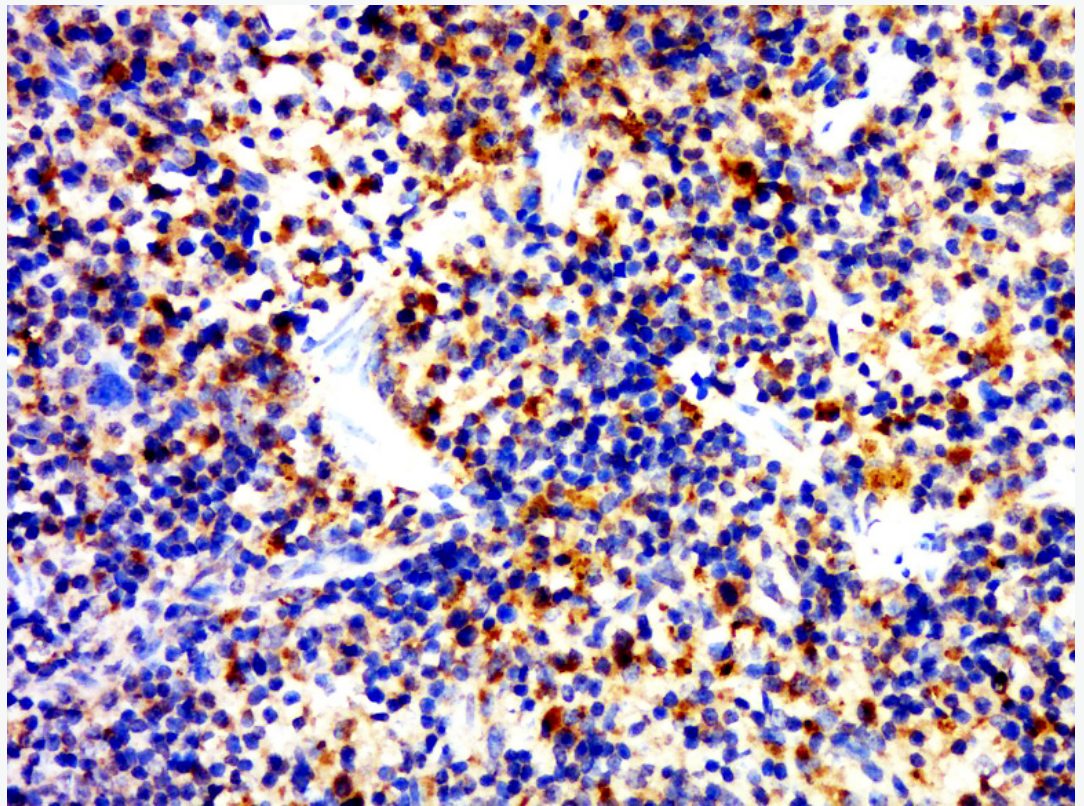
U937(Human) Cell Lysate at 30 ug

Primary: Anti- CD4 (SL0766R) at 1/1000 dilution

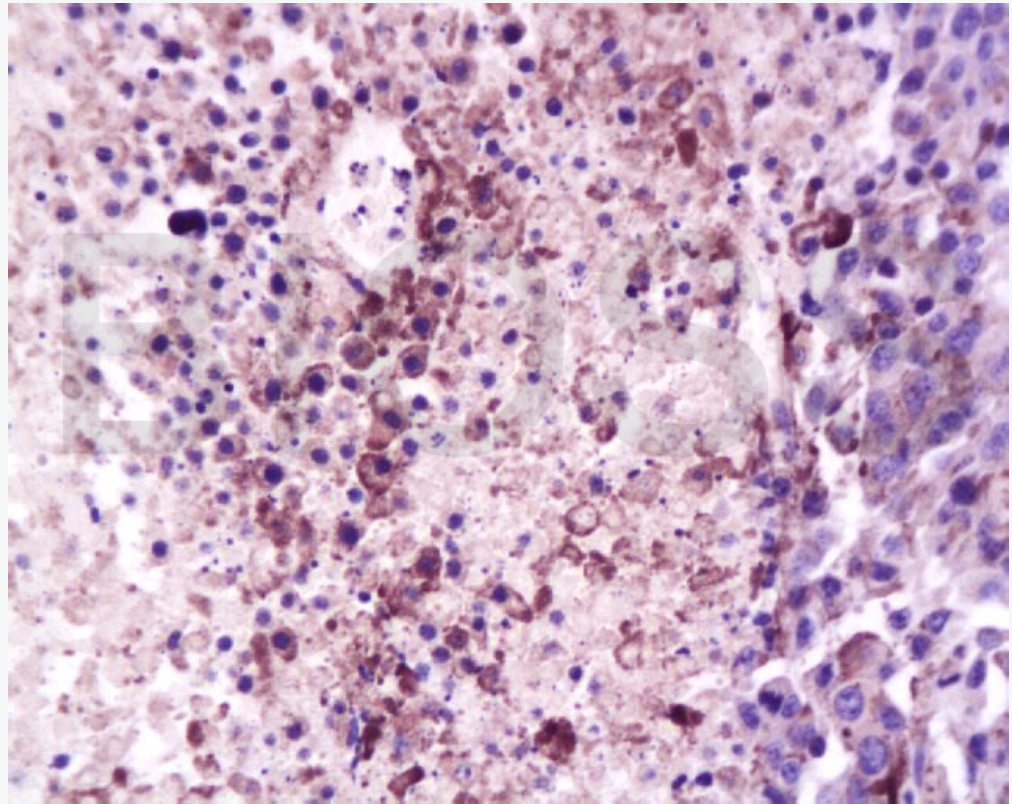
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 48 kD

Observed band size: 55 kD



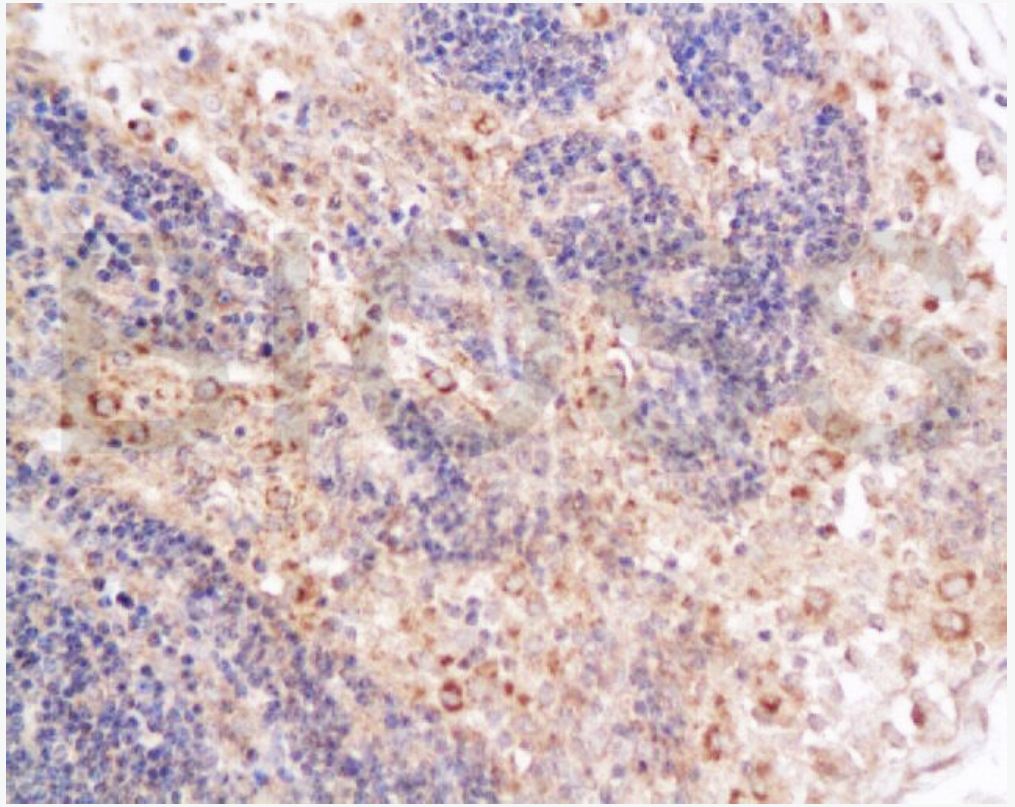
Paraformaldehyde-fixed, paraffin embedded (rat spleen); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CD4) Polyclonal Antibody, Unconjugated (SL0766R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Tissue/cell: mouse lymphoma tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

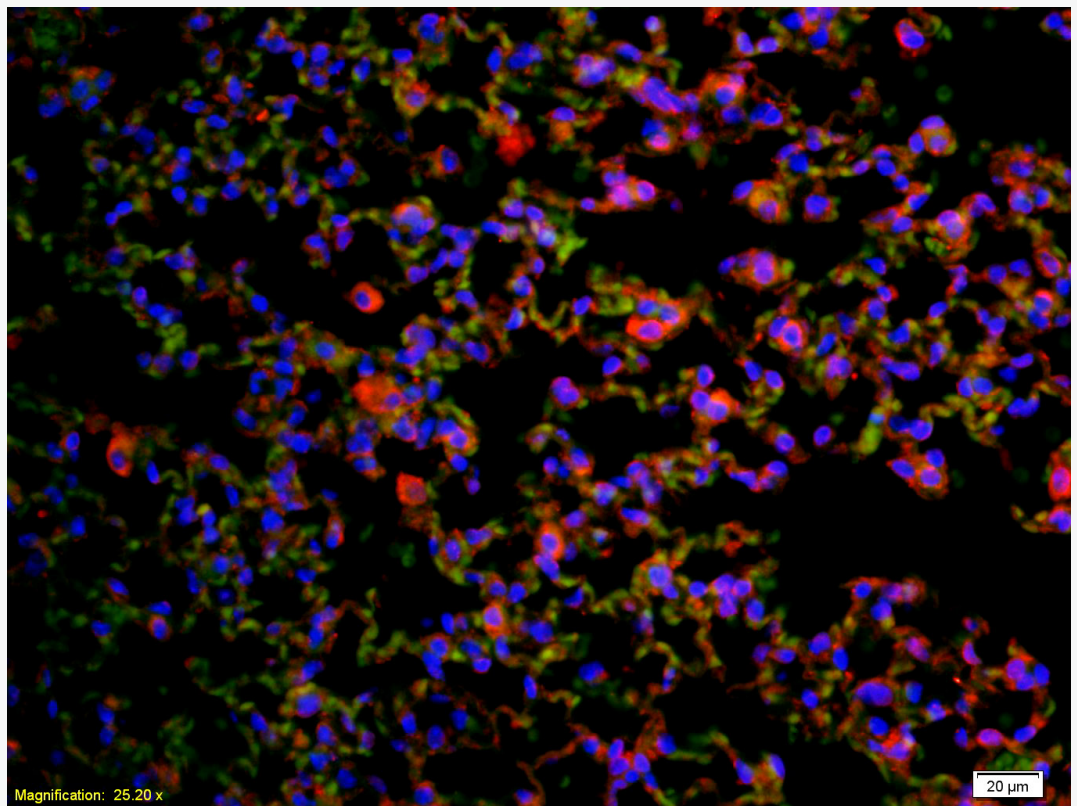
Incubation: Anti-CD4 Polyclonal Antibody, Unconjugated(SL0766R) 1:200, overnight at 4 癈, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



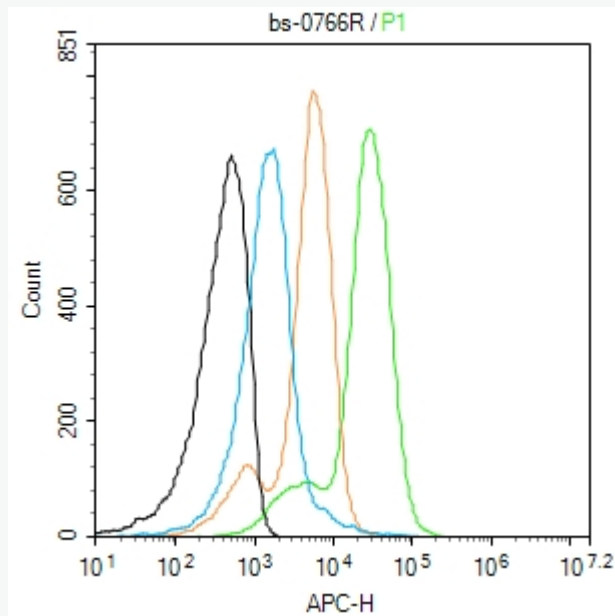
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Tissue/cell: rat lung tissue;4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min;
Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-CD4(mouse, rat) Polyclonal Antibody, Unconjugated(SL0766R)
1:200, overnight at 4 癩; The secondary antibody was Goat Anti-Rabbit IgG, Cy3
conjugated(SL0295G-Cy3)used at 1:200 dilution for 40 minutes at 37 癩.
DAPI(5ug/ml,blue,C-0033) was used to stain the cell nuclei



Blank control: Mouse spleen.

Primary Antibody (green line): Rabbit Anti-CD4 antibody (SL0766R)

Dilution: 3 μ g /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

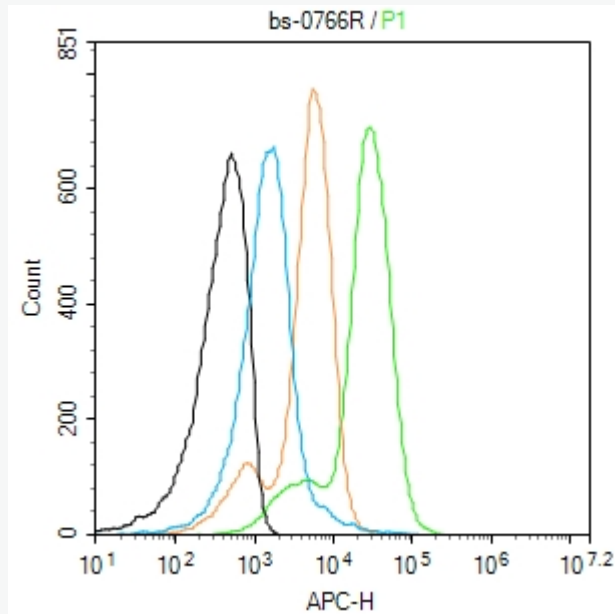
Secondary Antibody: Goat anti-rabbit IgG-AF647

Dilution: 3 μ g /test.

Protocol

The cells incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.



Blank control: Mouse spleen.

Primary Antibody (green line): Rabbit Anti-CD4 antibody (SL0766R)

Dilution: $3\mu\text{g} / 10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody: Goat anti-rabbit IgG-AF647

Dilution: $3\mu\text{g} / \text{test}$.

Protocol

The cells incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.