



Product Type:	Recombinant Chimeric Antibody, primary antibodies
Species reactivity:	Mouse
Applications:	WB, IF-Tissue, IHC-P, IHC-Fr
Molecular Wt:	Predicted band size: 51 kDa
Clone number:	PSH08-22

Description: In molecular biology, CD4 (cluster of differentiation 4) is a glycoprotein that serves as a co-receptor for the T-cell receptor (TCR). CD4 is found on the surface of immune cells such as helper T cells, monocytes, macrophages, and dendritic cells. It was discovered in the late 1970s and was originally known as leu-3 and T4 (after the OKT4 monoclonal antibody that reacted with it) before being named CD4 in 1984. In humans, the CD4 protein is encoded by the CD4 gene. CD4+ T helper cells are white blood cells that are an essential part of the human immune system. They are often referred to as CD4 cells, T helper cells or T4 cells. They are called helper cells because one of their main roles is to send signals to other types of immune cells, including CD8 killer cells, which then destroy the infectious particle. If CD4 cells become depleted, for example in untreated HIV infection, or following immune suppression prior to a transplant, the body is left vulnerable to a wide range of infections that it would otherwise have been able to fight.

Immunogen: Recombinant protein within mouse CD4 aa 27-394.

Positive control: Mouse thymus tissue lysate, mouse spleen tissue, mouse thymus tissue.

Subcellular location: Cell membrane.

Database links: SwissProt: P06332 Mouse

Recommended Dilutions:

WB	1:2,000
IF-Tissue	1:500
IHC-P	1:2,000
IHC-Fr	1:200-1:500

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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Images

Fig1: Western blot analysis of CD4 on different lysates with Rat anti-CD4 antibody (HA610354) at 1/2,000 dilution.

Lane 1: C2C12 cell lysate (negative)

Lane 2: Mouse thymus tissue lysate

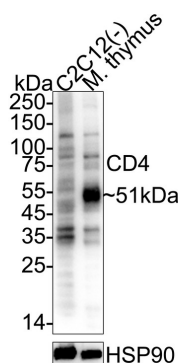
Lysates/proteins at 20 µg/Lane.

Predicted band size: 51 kDa

Observed band size: 51 kDa

Exposure time: 7 seconds; ECL: K1801;

4-20% SDS-PAGE gel.



Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA610354) at 1/2,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rat IgG H&L - HRP Secondary Antibody (HA1023) at 1/50,000 dilution was used for 1 hour at room temperature.

Fig2: Application: IF-Tissue

Species: Mouse

Site: spleen

Sample: Paraffin-embedded section

Antibody concentration: 1/500

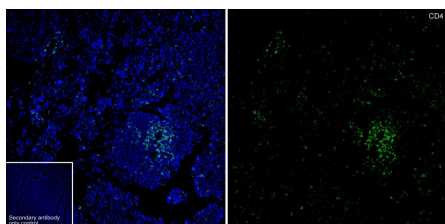
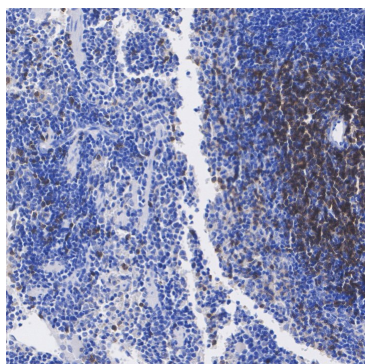


Fig3: Immunohistochemical analysis of paraffin-embedded mouse spleen tissue with Rat anti-CD4 antibody (HA610354) at 1/2,000 dilution.



The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA610354) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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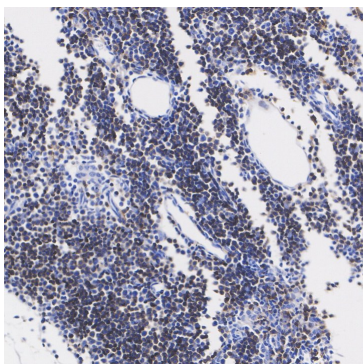


Fig4: Immunohistochemical analysis of paraffin-embedded mouse thymus tissue with Rat anti-CD4 antibody (HA610354) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA610354) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Ruterbusch M et al. In Vivo CD4(+) T Cell Differentiation and Function: Revisiting the Th1/Th2 Paradigm. *Annu Rev Immunol.* 2020 Apr
2. Oh DY et al. Cytotoxic CD4(+) T cells in cancer: Expanding the immune effector toolbox. *Immunity.* 2021 Dec

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Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation