

Anti-CD4 (pS433) Antibody

Rabbit polyclonal antibody to CD4 (pS433)

Catalog # AP61448

Product Information

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|--------------------------|---------------------------------------|
| Application | WB, IHC, IF |
| Primary Accession | P01730 |
| Other Accession | P06332 |
| Reactivity | Human, Mouse, Rat, Monkey, Drosophila |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 51111 |

Additional Information

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|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene ID | 920 |
| Other Names | T-cell surface glycoprotein CD4; T-cell surface antigen T4/Leu-3; CD4 |
| Target/Specificity | Recognizes endogenous levels of CD4 with a site at pS433 protein. |
| Dilution | WB~~WB (1/500 - 1/1000), IH (1/50 - 1/200), IF/IC (1/50 - 1/200) IHC~~1:100~500 IF~~WB (1/500 - 1/1000), IH (1/50 - 1/200), IF/IC (1/50 - 1/200) |
| Format | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide. |
| Storage | Store at -20 °C.Stable for 12 months from date of receipt |

Protein Information

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| Name | CD4 |
| Function | Integral membrane glycoprotein that plays an essential role in the immune response and serves multiple functions in responses against both external and internal offenses. In T-cells, functions primarily as a coreceptor for MHC class II molecule:peptide complex. The antigens presented by class II peptides are derived from extracellular proteins while class I peptides are derived from cytosolic proteins. Interacts simultaneously with the T-cell receptor (TCR) and the MHC class II presented by antigen presenting cells (APCs). In turn, recruits the Src kinase LCK to the vicinity of the TCR-CD3 complex. LCK then initiates different intracellular signaling pathways by phosphorylating various substrates ultimately leading to lymphokine production, motility, adhesion and activation of T-helper cells. In other cells such as macrophages or NK cells, plays a role in differentiation/activation, cytokine expression and cell migration in a TCR/LCK-independent pathway. |

Participates in the development of T- helper cells in the thymus and triggers the differentiation of monocytes into functional mature macrophages.

Cellular Location

Cell membrane; Single-pass type I membrane protein. Note=Localizes to lipid rafts (PubMed:12517957, PubMed:9168119). 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

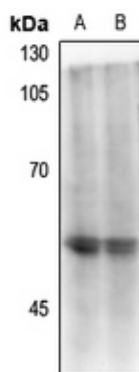
Tissue Location

Highly expressed in T-helper cells. The presence of CD4 is a hallmark of T-helper cells which are specialized in the activation and growth of cytotoxic T-cells, regulation of B cells, or activation of phagocytes. CD4 is also present in other immune cells such as macrophages, dendritic cells or NK cells

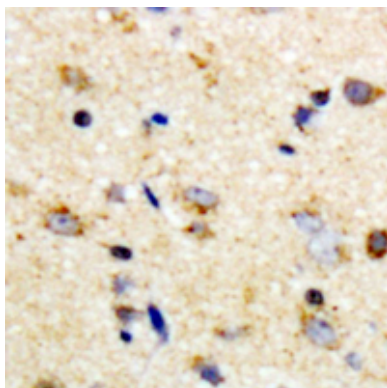
Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human CD4 with a site at pS433. The exact sequence is proprietary.

Images

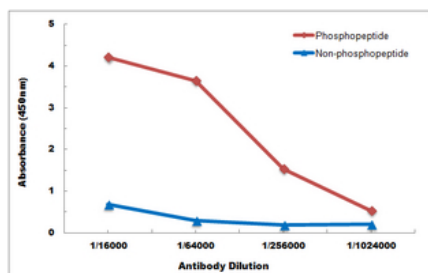
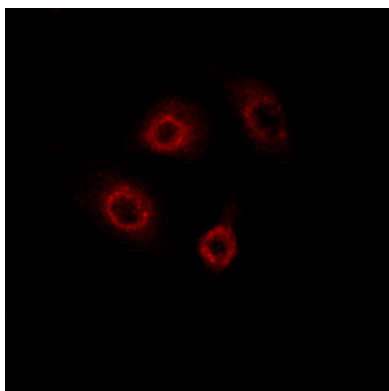


Western blot analysis of CD4 (pS433) expression in mouse spleen (A), rat spleen (B) whole cell lysates.



Immunohistochemical analysis of CD4 (pS433) staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of CD4 (pS433) staining in HepG2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a Alexa Fluor 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.



Direct ELISA antibody dose-response curve using Anti-CD4 (pS433) Antibody. Antigen (phosphopeptide and non-phosphopeptide) concentration is 5 ug/ml. Goat Anti-Rabbit IgG (H&L) - HRP was used as the secondary antibody, and signal was developed by TMB substrate.

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