

ARG43715 anti-CD4 antibody

Package: 50 µg
Store at: -20°C

Summary

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|---------------------|--|
| Product Description | Rabbit Polyclonal antibody recognizes CD4 |
| Tested Reactivity | Ms |
| Predict Reactivity | Rat |
| Tested Application | FACS, IHC-P, WB |
| Host | Rabbit |
| Clonality | Polyclonal |
| Isotype | IgG |
| Target Name | CD4 |
| Species | Rat |
| Immunogen | Recombinant protein corresponding to K28-I457 of Rat CD4. |
| Conjugation | Un-conjugated |
| Alternate Names | CD4mut; CD antigen CD4; T-cell surface glycoprotein CD4; T-cell surface antigen T4/Leu-3; p55; W3/25 |

Application Instructions

| Application table | Application | Dilution |
|-------------------|--|----------------|
| | FACS | 1:150 - 1:500 |
| | IHC-P | 1:200 - 1:1000 |
| | WB | 1:500 - 1:2000 |
| Application Note | IHC-P: Antigen Retrieval: By heat mediation. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist. | |
| Positive Control | mouse PBMC, Raw264.7, ANA-1, mouse thymus tissue | |
| Observed Size | 54 kDa | |

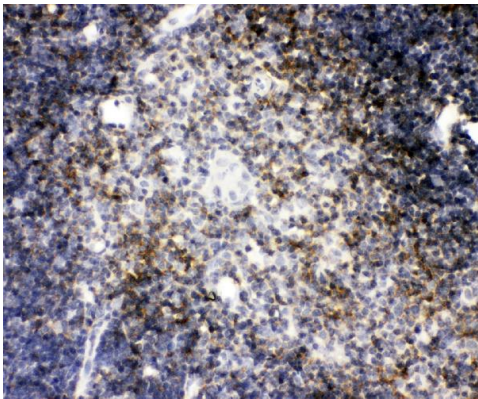
Properties

| | |
|---------------|---|
| Form | Liquid |
| Purification | Affinity purification with immunogen. |
| Buffer | 0.2% Na ₂ HPO ₄ , 0.9% NaCl, 0.01% Sodium azide and 4% Trehalose. |
| Preservative | 0.01% Sodium azide |
| Stabilizer | 4% Trehalose |
| Concentration | 0.5 mg/ml |

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| Storage instruction | For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use. |
| Note | For laboratory research only, not for drug, diagnostic or other use. |

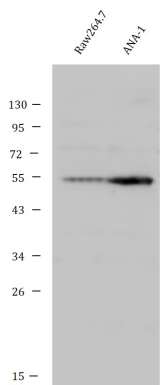
Bioinformation

| | |
|-----------------------|---|
| Gene Symbol | Cd4 |
| Gene Full Name | Cd4 molecule |
| Background | <p>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]</p> |
| Function | <p>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.</p> <p>(Microbial infection) Primary receptor for human immunodeficiency virus-1 (HIV-1) (PubMed:2214026, PubMed:16331979, PubMed:9641677, PubMed:12089508). Down-regulated by HIV-1 Vpu (PubMed:17346169). Acts as a receptor for Human Herpes virus 7/HHV-7 (PubMed:7909607). [UniProt]</p> |
| Calculated Mw | 51 kDa |
| PTM | Palmitoylation and association with LCK contribute to the enrichment of CD4 in lipid rafts. [UniProt] |
| Cellular Localization | <p>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. [UniProt]</p> |



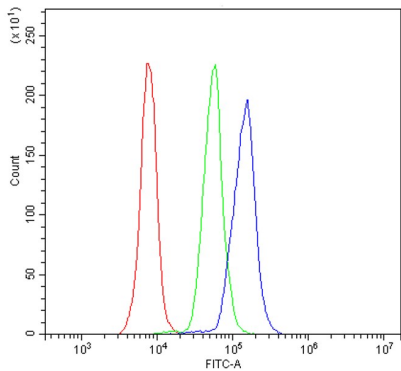
ARG43715 anti-CD4 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Mouse thymus tissue. Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0). The tissue section was then stained with ARG43715 anti-CD4 antibody at 1 µg/ml dilution, and incubated overnight at 4°C.



ARG43715 anti-CD4 antibody WB image

Western blot: 50 µg of samples under reducing conditions. Mouse Raw264.7 and ANA-1 whole cell lysates stained with ARG43715 anti-CD4 antibody at 0.5 µg/ml dilution, and incubated overnight at 4°C.



ARG43715 anti-CD4 antibody FACS image

Flow Cytometry: Mouse PBMC cells were blocked with 10% normal goat serum and then stained with ARG43715 anti-CD4 antibody (blue) at 1 µg/10⁶ cells for 30 min at 20°C, followed by incubation with DyLight®488 labelled secondary antibody. Isotype control antibody (green) was rabbit IgG (1 µg/10⁶ cells) used under the same conditions. Unlabelled sample (red) was also used as a control.