abcam

# ab270271

# Anti-CD6/T12 antibody [C6/2884R]

Recombinant

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Recombinant Full Length Protein corresponding to Human T-cell differentiation antigen CD6. Database link P30203 |
| **Clone number** | C6/2884R |
| **Purification technique** | Affinity purification Protein A/G |
| **Concentration** | 0.2 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |
| **Purification notes** | Purified from Bioreactor Concentrate by Protein A/G. |

## Reactivity data

## Flow Cyt

### Tested

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|---|---|
| **Species** | Human |
| **Dilution info** | 1-2 µg for $10^6$ Cells |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1-2 µg/mL |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1-2 µg/mL |
| **Notes** | - |

## Target data

See full target information T-cell differentiation antigen CD6

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|---|---|
| **Function** | Cell adhesion molecule that mediates cell-cell contacts and regulates T-cell responses via its interaction with ALCAM/CD166 (PubMed:15048703, PubMed:15294938, PubMed:16352806, PubMed:16914752, PubMed:24584089, PubMed:24945728). Contributes to signaling cascades triggered by activation of the TCR/CD3 complex (PubMed:24584089). Functions as a costimulatory molecule; promotes T-cell activation and proliferation (PubMed:15294938, PubMed:16352806, PubMed:16914752). Contributes to the formation and maturation of the immunological synapse (PubMed:15294938, PubMed:16352806). Functions as a calcium-dependent pattern receptor that binds and aggregates both Gram-positive and Gram-negative bacteria. Binds both lipopolysaccharide (LPS) from Gram-negative bacteria and lipoteichoic acid from Gram-positive bacteria (PubMed:17601777). LPS binding leads to the activation of signaling cascades and down-stream MAP kinases (PubMed:17601777). Mediates activation of the inflammatory response and the secretion of pro-inflammatory cytokines in response to LPS (PubMed:17601777). |

## Storage

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|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |

| | |
|---|---|
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

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|---|---|
| **Activity summary** | CD6 also known as T12 is a glycoprotein expressed on T cells and some subsets of B cells. The protein has a molecular mass of approximately 105-130 kDa. CD6 is primarily located on the surface of thymocytes mature T lymphocytes and on some B cell lines. It plays an important role in the immunological synapse serving as a receptor that aids in cell-to-cell communication during immune responses. The CD6 protein is also detectable in immune tissues including the spleen and lymph nodes. |
| **Biological function summary** | CD6 functions involve T cell maturation and proliferation. The protein is part of the lymphocyte activation complex contributing to the modulation of T cell receptor (TCR) signaling. It interacts with other cell surface proteins such as CD3 and CD28 to influence the response of T cells to antigens. CD6 potentially modulates the threshold for T cell activation favoring the adjustment of immune responses to various antigens. |
| **Pathways** | CD6 participates in the signaling pathways that regulate adaptive immune responses. It is involved in the T cell receptor (TCR) signaling pathway essential for T cell activation and differentiation. CD6 interacts with proteins like LCK and ZAP-70 which are pivotal for the TCR signaling cascade. Additionally CD6's role in immune synapse formation connects it to the modulation of cytokine production and immune cell communication. |
| **Associated diseases and disorders** | CD6 associates with autoimmune diseases and multiple sclerosis. The protein's involvement in T cell activation and immune regulation makes it a candidate for studies targeting autoimmune pathologies. Autoimmune disorders such as rheumatoid arthritis have shown links with CD6's activity as its deregulation can lead to inappropriate immune responses. Additionally CD6's interaction with proteins like CD166 has implications in the pathogenesis of these disorders indicating a potential target for therapeutic interventions. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

We do not recommend this combination. It is not covered by our product promise.

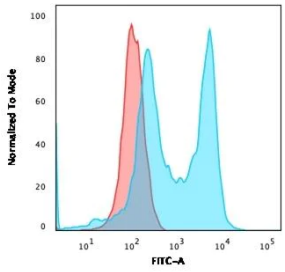
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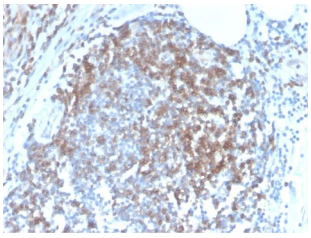
## 3 product images




### Flow Cytometry - Anti-CD6/T12 antibody [C6/2884R] (ab270271)

CD6/T12 Flow Cytometry staining using rabbit Anti-CD6/T12 antibody

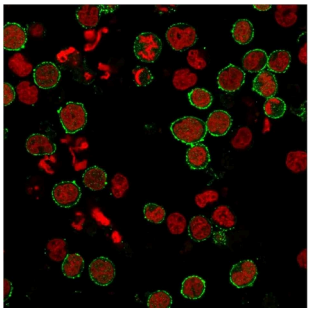
Flow cytometric analysis of MOLT-4 cells labeling CD6/T12 (Blue) using ab270271 at 2 µg/$10^6$ cells, followed by goat anti-mouse IgG-CF488; isotype control (Red).



### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD6/T12 antibody [C6/2884R] (ab270271)

CD6/T12 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD6/T12 antibody

Formalin-fixed, paraffin-embedded humantonsil stained for CD6/T12 using ab270271 at 2 µg/ml in imunnohistochemical analysis.



## Immunocytochemistry/ Immunofluorescence - Anti-CD6/T12 antibody [C6/2884R] (ab270271)

CD6/T12 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD6/T12 antibody

Immunofluorescence analysis of MOLT-4 cells labeling CD6/T12 (Green) with ab270271 at 2 µg/ml, followed by goat anti-rabbit IgG conjugated to CF488. Nuclei are stained with Reddot (Red).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.