abcam

ab270302

Anti-CD6/T12 antibody [C6/2884R] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human T-cell differentiation antigen CD6. Database link P30203
Carrier free	Yes
Clone number	C6/2884R
Purification technique	Affinity purification Protein A/G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from bioreactor concentrate.

Reactivity data

Flow Cyt

Tested

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	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information T-cell differentiation antigen CD6

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

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

Notes

ab270302 is a carrier free version of ab270271.
Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Supplementary info

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

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

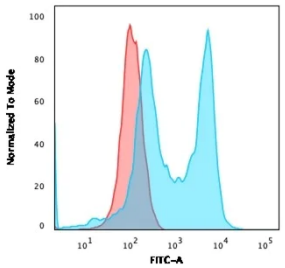
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

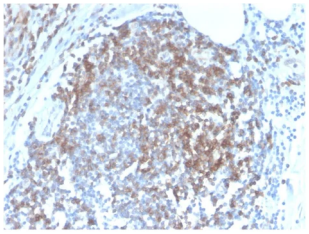
2 product images



Flow Cytometry - Anti-CD6/T12 antibody [C6/2884R] - BSA and Azide free (ab270302)

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

Flow cytometric analsysis of MOLT-4 (Human lymphoblastic leukemia cell line) cells labeling CD6/T12 using ab270271 at 2µg/10^6 cells followed by the goat anti-rabbit IG-CF488 (blue); isotope control (red).
This image was produced using the same antibody clone but in a different formulation ab270271, PBS, BSA and sodium azide.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD6/T12 antibody [C6/2884R] - BSA and Azide free (ab270302)

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

Formalin-fixed, paraffin-embedded human tonsil tissue stained for CD6/T12 using ab270271 at 2µg/ml in immunohistochemical analyisis.
This image was produced using the same antibody clone but in a different formulation ab270271, PBS, BSA and sodium azide.

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