abcam

ab283489

Alexa Fluor® 555 Anti-CTLA-4/CD152 antibody [CAL49]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 555
Excitation/Emission	Ex: 555nm, Em: 565nm
Storage buffer	pH: 7.2 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	CAL49
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Expected

Species	Human, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information CTLA-4/CD152

Function	Inhibitory receptor acting as a major negative regulator of T-cell responses (PubMed:11279501, PubMed:11279502, PubMed:16551244, PubMed:1714933, PubMed:18641304, PubMed:28484017). Acts as a decoy receptor: the affinity of CTLA4 for its natural B7 family ligands, CD80 and CD86, is considerably stronger than the affinity of their cognate stimulatory coreceptor CD28 (PubMed:11279501, PubMed:11279502, PubMed:16551244, PubMed:1714933, PubMed:28484017).

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, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

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

Activity summary	CTLA-4 also known as CD152 is an immune checkpoint receptor with a molecular weight of approximately 34 kDa. This protein is expressed on the surface of T-cells especially after activation and sometimes on regulatory T-cells (Tregs). CTLA-4 competes with CD28 for binding to the same ligands CD80 and CD86 on antigen-presenting cells. Unlike CD28 which stimulates T-cell activation CTLA-4 sends inhibitory signals to downregulate immune responses. By doing this CTLA-4 helps maintain immune system homeostasis and prevents autoimmune reactions.
Biological function summary	The CTLA-4 protein functions as a critical regulator of the immune system. It interacts with CD80/CD86 in a complex that effectively transmits inhibitory signals to T-cells. CTLA-4 controls the amplitude of the initial activation of T-cells ensuring that the body's immune responses are kept under control. In regulatory T-cells

	CTLA-4 engagement contributes to their immunosuppressive functions through which they maintain tolerance to self-antigens and prevent overactive immune reactions.
Pathways	CTLA-4 involves itself in the adaptive immune response pathways specifically the regulation of T-cell activity. CTLA-4's interaction with CD80/CD86 modulates pathways associated with TCR (T-cell receptor) signaling. When CTLA-4 binds its ligands it recruits phosphatases such as SHP-2 that dephosphorylate signaling proteins leading to the downregulation of T-cell interaction. This pathway interaction exemplifies how CTLA-4 acts in concert with proteins like CD28 to finely tune immune responses.
Associated diseases and disorders	CTLA-4 plays a role in autoimmune diseases and cancer. The dysregulation of CTLA-4 function can lead to autoimmune disorders where the immune system attacks the body's own tissue. In cancer tumor cells may manipulate CTLA-4 pathways to evade immune surveillance. Targeted therapies like anti-CTLA-4 antibodies such as ipilimumab have been developed to block CTLA-4 aiming to enhance the immune system’s ability to attack cancer cells. These treatments highlight the role of CTLA-4 in balancing immune activity and the potential to alter this balance for therapeutic benefit.

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

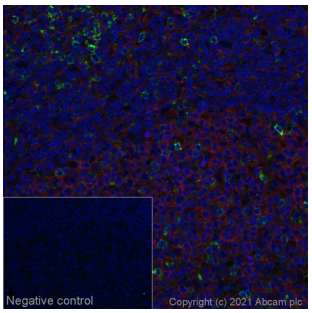
We do not recommend this combination. It is not covered by our product promise.

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.

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Terms & Conditions.

1 product image



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 555 Anti-CTLA-4/CD152 antibody [CAL49] (ab283489)

CTLA-4/CD152 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CTLA-4/CD152 antibody

Immunofluorescence staining of CTLA4 staining in a section of formalin-fixed paraffin-embedded human normal tonsil*.
Performed on a Leica BOND. The section was pre-treated using heat mediated antigen retrieval with EDTA (pH9.0) using retrieval settings of 110°C for 20 minutes. The section was then incubated at room temperature for 1 hour with ab283489 at 1/100 dilution (shown in green) and counterstained using ab190573, Rabbit anti-Tubulin (A647)(1/250) at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Dako Fluorescence Mounting Medium®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For other IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antigen retrieval conditions, antibody concentrations and incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre.

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