abcam

ab267565

Alexa Fluor® 647 Anti-PD-L1/CD274 antibody [CAL10]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 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	CAL10
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	-

Flow Cyt (Intra)

Expected

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

ICC/IF

Expected

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

Target data

See full target information PD-L1/CD274

Function

Plays a critical role in induction and maintenance of immune tolerance to self (PubMed:11015443, PubMed:28813410, PubMed:28813417, PubMed:31399419). As a ligand for the inhibitory receptor PDCD1/PD-1, modulates the activation threshold of T-cells and limits T-cell effector response (PubMed:11015443, PubMed:28813410, PubMed:28813417, PubMed:36727298). Through a yet unknown activating receptor, may costimulate T-cell subsets that predominantly produce interleukin-10 (IL10) (PubMed:10581077). Can also act as a transcription coactivator: in response to hypoxia, translocates into the nucleus via its interaction with phosphorylated STAT3 and promotes transcription of GSDMC, leading to pyroptosis (PubMed:32929201). The PDCD1-mediated inhibitory pathway is exploited by tumors to attenuate anti-tumor immunity and escape destruction by the immune system, thereby facilitating tumor survival (PubMed:28813410, PubMed:28813417). The interaction with PDCD1/PD-1 inhibits cytotoxic T lymphocytes (CTLs) effector function (By similarity). The blockage of the PDCD1-mediated pathway results in the reversal of the exhausted T-cell phenotype and the normalization of the anti-tumor response, providing a rationale for cancer immunotherapy (By similarity).

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, Stable for 12 months at -20°C, 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	PD-L1 also known as Programmed Death-Ligand 1 or CD274 is a protein involved in immune modulation. Mechanically PD-L1 interacts with its receptors particularly PD-1 to regulate cellular immune responses. This transmembrane protein has a calculated molecular weight of approximately 33 kDa. PD-L1 is expressed on various cell types including tumor cells and immune cells such as dendritic cells macrophages and B cells. Its expression is often upregulated in response to inflammatory cytokines.
Biological function summary	PD-L1 plays a central role in immune evasion mechanisms utilized by tumors. It is not part of a larger protein complex but directly interacts with PD-1 and CD80. When PD-L1 binds to PD-1 it sends inhibitory signals leading to decreased T cell activation and proliferation allowing cancer cells to avoid immune destruction. PD-L1 expression provides a mechanism for tumors to suppress immune surveillance facilitating tumor progression.
Pathways	PD-L1 is integral to the immune checkpoint pathway which is an important regulator of immune response. The interaction between PD-L1 and PD-1 provides a mechanism for immune tolerance which is part of the broader adaptive immune system pathway. PD-L1 is related to other immune checkpoint proteins such as CTLA-4 in its function to limit autoreactivity and promote immune homeostasis.
Associated diseases and disorders	PD-L1 is most associated with cancer particularly in tumors such as melanoma and non-small cell lung cancer. PD-L1 expression on tumor cells often correlates with poor prognosis. PD-L1 directly interacts with PD-1 in these cancers a target for immunotherapies such as checkpoint inhibitors which aim to block this interaction and restore immune activity against tumors. PD-L1 involvement extends to autoimmune disorders where altered expression can impact tolerance and lead to immune-related tissue damage.

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

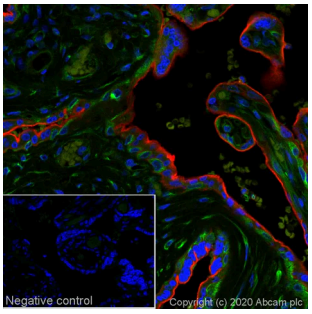
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 647 Anti-PD-L1/CD274 antibody [CAL10] (ab267565)

PD-L1/CD274 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PD-L1/CD274 antibody

IHC image of PD-L1 staining in a section of formalin-fixed paraffin-embedded normal human placenta*. The section was pre-treated using heat mediated antigen retrieval with EDTA buffer (pH9.0) (performed on a Leica Biosystems BOND™ RX instrument) 100°C for 20 minutes. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M (w/v) glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab267565 at 1/100 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Fluoromount®. 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'.