abcam

ab209960

# Alexa Fluor® 647 Anti-PD-L1/CD274 antibody [28-8] - Extracellular domain

Anti-PD-L1/CD274 antibody [28-8] - Extracellular domain - Alexa Fluor® 647 conjugated (ab209960) is a rabbit recombinant monoclonal antibody detecting PD-L1/CD274 in **Flow Cytometry, ICC/IF**. Suitable for **Human**.

- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb

## Key facts

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|---|---|
| **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** | 28-8 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.5 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## ICC/IF

### Tested

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|---|---|
| **Species** | Human |
| **Dilution info** | 1/100 |
| **Notes** | This product gave a positive signal in CHO-PDL1 cells fixed with 4% formaldehyde (10 min) |

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/100 |
| **Notes** | - |

## Target data

See full target information PD-L1/CD274

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|---|---|
| **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

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

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|---|---|
| **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

**What is this antibody validated in?**
Alexa Fluor® 647 Anti-PD-L1 antibody [28-8] - Extracellular domain (ab209960) is a rabbit recombinant monoclonal antibody and is validated for use in Flow Cytometry (Flow Cyt), Immunocytochemistry/immunofluorescence (ICC/IF) in Human samples.

**Related products**
Antibody clone 28-8 is also available pre-conjugated to a variety of labels for your convenience – Anti-PD-L1 Alexa Fluor® 647 [28-8] - Extracellular domain (ab209960).

**Other related products**
We have a range of other formats of antibody clone [28-8] also available for your convenience: ab205921, APC - ab206967, Carrier free - ab209889, Alexa Fluor® 488 - ab209959, Alexa Fluor® 647 - ab209960, HRP - ab209961, PE - ab209962, Alexa Fluor® 555 - ab213358, Alexa Fluor® 568 - ab213359, Alexa Fluor® 594 - ab213360, FITC - ab224027, Carrier free - ab228413, Carrier free - ab278010, Alexa Fluor® 647 - ab303724, Carrier free - ab307495, Biotin - ab322788

**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.

Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@thermofisher.com.

## Supplementary info

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

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|---|---|
| **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**

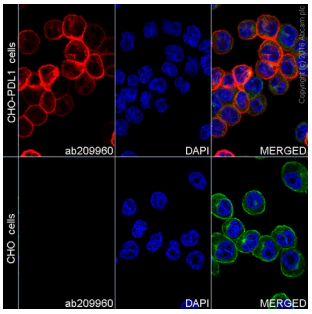
We do not recommend this combination. It is not covered by our product promise.

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.

## 2 product images

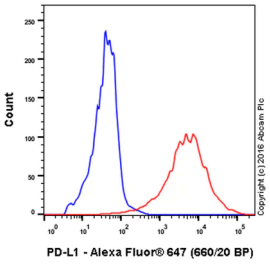



### Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-PD-L1/CD274 antibody [28-8] - Extracellular domain (ab209960)

PD-L1/CD274 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PD-L1/CD274 antibody

ab209960 staining PDL1 in CHO-PDL1 cells. The lower panels demonstrate that ab209960 does not cross react with un-transfected CHO cells.
The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab209960 at 1/200 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labeled with DAPI (shown in blue).

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




### Flow Cytometry - Alexa Fluor® 647 Anti-PD-L1/CD274 antibody [28-8] - Extracellular domain (ab209960)

PD-L1/CD274 Flow Cytometry staining using rabbit Anti-PD-L1/CD274 antibody

Overlay histgram showing CHO (blue line) and CHO-PD-L1 transfected (red line) cells stained with ab209960.
The cells were incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab209960, 1/100 dilution) for 30 min at 4°C.

Acquisition of >5,000 events were collected using a 17mW red Helium-Neon laser (633nm) and 660/20 bandpass filter.

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