

TotalSeq™-B0007 anti-human CD274 (B7-H1, PD-L1) Antibody

Catalog# / Size	329749 / 10 µg
Clone	29E.2A3
Regulatory Status	RUO
Other Names	Programmed cell death ligand 1 (PD-L1), B7 homolog 1 (B7-H1)
Isotype	Mouse IgG2b, κ
Barcode Sequence	GTTGTCCGACAATAC
Description	CD274, also known as PD-L1 and B7-H1, is type I transmembrane glycoprotein that serves as a ligand for CD279 (PD-1). This interaction is believed to regulate the balance between the stimulatory and inhibitory signals needed for responses to microbes and maintenance of self-tolerance. CD274 is involved in the costimulation of T cell proliferation and IL-10 and IFN-γ production in an IL-2-dependent and CD279-independent manner. Conflicting data has shown that CD274 can inhibit T cell proliferation and cytokine production, and alternatively, enhance T cell activation. Other studies suggest that CD274 may signal bidirectionally, raising interesting implications for its expression in a wide variety of cell types, including T and B cells, antigen-presenting cells, and nonhematopoietic cells.

Product Details

Verified Reactivity	Human
Reported Reactivity	African Green, Baboon, Cynomolgus, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Full length human PD-L1
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 1 mM EDTA.
Preparation	The antibody was purified by chromatography and conjugated with TotalSeq™-B oligomer under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	PG - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis and the oligomer sequence is confirmed by sequencing. TotalSeq™-B antibodies are compatible with 10x Genomics Single Cell Gene Expression Solutions .

To maximize performance, it is strongly recommended that the reagent be titrated for each application, and that you centrifuge the antibody dilution before adding to the cells at 14,000xg at 2 - 8°C for 10 minutes. Carefully pipette out the liquid avoiding the bottom of the tube and add to the cell suspension. For Proteogenomics analysis, the suggested starting amount of this reagent for titration is ≤ 1.0 µg per million cells in 100 µL volume. Refer to the corresponding TotalSeq™ protocol for specific staining instructions.

Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.

Application Notes	Clone 29E.2A3 is reported to recognize an epitope on PD-L1 within the PD-L1-CD80 binding region ⁵ . Additional reported applications (for the relevant formats) include: blocking ¹⁻³ and immunohistochemical staining of acetone-fixed frozen sections ¹ . The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional
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assays (Cat. No. 329715, 329716, 329745 - 329748).

It has been observed that clone 29E.2A3 is able to bind to Alexa Fluor® 700 antibody conjugates during multi-color immunofluorescent staining. This interaction can be resolved by sequentially staining with the 29E.2A3 antibody first and then followed by the Alexa Fluor® 700 conjugate of interest.

Clone 29E.2A3 does not work in Western blot applications⁷.

Additional Product Notes

TotalSeq™ reagents are designed to profile protein levels at a single cell level following an optimized protocol similar to the CITE-seq workflow. A compatible single cell device (e.g. [10x Genomics Chromium System and Reagents](#)) and sequencer (e.g. Illumina analyzers) are required. Please contact [technical support](#) for more information, or visit [biolegend.com/totalseq](#).

The barcode flanking sequences are
GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCTNNNNNNNNN (PCR handle), and
NNNNNNNNNGCTTTAAGGCCGGTCCTAGC*A*A (capture sequence). N represents either randomly selected A, C, G, or T, and * indicates a phosphorothioated bond, to prevent nuclease degradation.

View more applications data for this product in our [Scientific Poster Library](#).

Application References

(PubMed link indicates BioLegend citation)

1. Brown J, *et al.* 2003. *J. Immunol.* 170:1257. (FC, IHC, Block)
2. Radziewicz H, *et al.* 2007. *J. Virol.* 81:2545. (Block)
3. Nakamoto N, *et al.* 2009. *PLoS Pathog.* 5:e1000313. (Block)
4. Barsoum IB, *et al.* 2014. *Cancer Res.* 74:665. [PubMed](#)
5. Haile, S *et al.* 2013. *J. Immunol.* 191:2829.
6. RL M, *et al.* 2015. *PNAS.* 112:6506-6514. [PubMed](#)
7. Mahoney KM, *et al.* 2015. *Cancer Immunol. Res.* 3:1308.

RRID

AB_2800859 (BioLegend Cat. No. 329749)

Antigen Details

Distribution	T cells, B cells, NK cells, monocytes/macrophages, granulocytes and dendritic cells
Function	CD274 is involved in the costimulatory signal, essential for T lymphocyte proliferation and production of IL-10 and IFN- γ , in an IL-2-dependent and a PD-1-CD1-independent manner. Its interaction with PD-1-CD1 inhibits T-cell proliferation and cytokine production.
Ligand/Receptor	PD-1 (PDCD1)
Cell Type	B cells, Dendritic cells, Fibroblasts, Granulocytes, Macrophages, Monocytes, NK cells, T cells
Biology Area	Cancer Biomarkers, Costimulatory Molecules, Immunology
Molecular Family	Adhesion Molecules, CD Molecules, Immune Checkpoint Receptors
Antigen References	1. Sharpe A, <i>et al.</i> 2007. <i>Nat. Immunol.</i> 8:239.
Gene ID	29126

Related Protocols

[TotalSeq™-B or -C with 10x Feature Barcoding Technology](#)

Other Formats

Purified anti-human CD274 (B7-H1, PD-L1), Biotin anti-human CD274 (B7-H1, PD-L1), PE anti-human CD274 (B7-H1, PD-L1), APC anti-human CD274 (B7-H1, PD-L1), Brilliant Violet 421™ anti-human CD274 (B7-H1, PD-L1), Ultra-LEAF™ Purified anti-human CD274 (B7-H1, PD-L1), PE/Cyanine7 anti-human CD274 (B7-H1, PD-L1), Purified anti-human CD274 (B7-H1, PD-L1) (Maxpar® Ready), Brilliant Violet 711™ anti-human CD274 (B7-H1, PD-L1), Brilliant Violet 605™ anti-human CD274 (B7-H1, PD-L1), GolnVivo™ Purified anti-human CD274 (B7-H1, PD-L1), PE/Dazzle™ 594 anti-human CD274 (B7-H1, PD-L1), Brilliant Violet 785™ anti-human CD274 (B7-H1, PD-L1), Brilliant Violet 510™ anti-human CD274 (B7-H1, PD-L1), PerCP/Cyanine5.5 anti-human CD274 (B7-H1, PD-L1), Brilliant Violet 650™ anti-human CD274 (B7-H1, PD-L1), Alexa Fluor® 594 anti-human CD274 (B7-H1, PD-L1), TotalSeq™-A0007 anti-human CD274 (B7-H1, PD-L1), TotalSeq™-B0007 anti-human CD274 (B7-H1, PD-L1), TotalSeq™-C0007 anti-human CD274 (B7-H1, PD-L1), TotalSeq™-D0007 anti-human CD274 (B7-H1, PD-L1), PE/Fire™ 810 anti-human CD274 (B7-H1, PD-L1) Antibody, PE/Cyanine5 anti-human CD274 (B7-H1, PD-L1), Spark YG™ 570 anti-human CD274 (B7-H1, PD-L1)

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