Anti-PD-L2 Antibody [A10D8]

HA601331

Product Type:	Mouse monoclonal IgG2b, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell
Molecular Wt:	Predicted band size: 31 kDa
Clone number:	A10D8

Description: Programmed cell death 1 ligand 2 (also known as PD-L2, B7-DC) is a protein that in humans is encoded by the PDCD1LG2 gene. PDCD1LG2 has also been designated as CD273 (cluster of differentiation 273). PDCD1LG2 is an immune checkpoint receptor ligand which plays a role in negative regulation of the adaptive immune response. PD-L2 is one of two known ligands for Programmed cell death protein 1 (PD-1). PD-L2 binds to its receptor PD-1 with dissociation constant Kd of 11.3 nM. Binding to PD-1 can activate pathways inhibiting TCR/BCR-mediated immune cell activation (for a more detailed discussion see PD-1 signaling). PD-L2 plays an important role in immune tolerance and autoimmunity. Both PD-L1 and PD-L2 can inhibit T cell proliferation and inflammatory cytokine production. Blocking PD-L2 has been shown to exacerbate experimental autoimmune encephalomyelitis. Unlike PD-L1, PD-L2 has been shown activate the immune system. PD-L2 triggers IL-12 production in murine dendritic cells leading to T cell activation. Others have shown that treatment with PD-L2 Ig led to T helper cell proliferation.

Immunogen: Recombinant protein within human PD-L2 aa 1-220 / 273.

Positive control: Saos-2 cell lysate, MG-63 cell lysate, HDLM-2.

Subcellular location: Secreted; Endomembrane system; Cell membrane.

Database links: SwissProt: Q9BQ51 Human

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:100

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

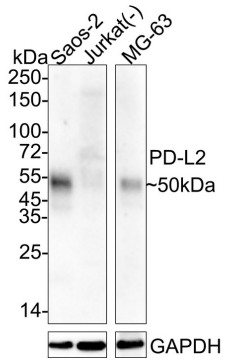

Fig1: Western blot analysis of PD-L2 on different lysates with Mouse anti-PD-L2 antibody (HA601331) at 1/1,000 dilution.

Lane 1: Saos-2 cell lysate (hot lysis)
Lane 2: Jurkat cell lysate (negative)
Lane 3: MG-63 cell lysate (hot lysis)

Lysates/proteins at 20 µg/Lane.

Predicted band size: 31 kDa
Observed band size: 50 kDa

Exposure time: Lane 1-2: 1 minute; Lane 3: 2 minutes;
ECL: K1802;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601331) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

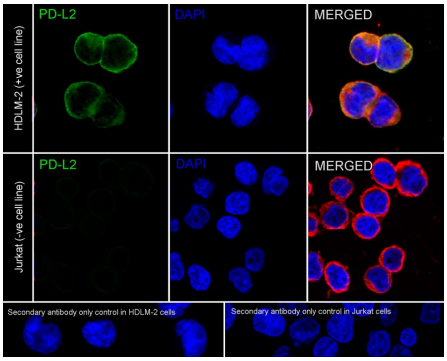

Fig2: Immunocytochemistry analysis of HDLM-2 (positive) and Jurkat (negative) labeling PD-L2 with Mouse anti-PD-L2 antibody (HA601331) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-PD-L2 antibody (HA601331) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

Background References

1. Park JS et al. Targeting PD-L2-RGMb overcomes microbiome-related immunotherapy resistance. Nature. 2023 May
2. Fan Z et al. The generation of PD-L1 and PD-L2 in cancer cells: From nuclear chromatin reorganization to extracellular presentation. Acta Pharm Sin B. 2022 Mar