**PD-L1 (E1L3N®) XP® Rabbit mAb**

**Background:** Programmed cell death 1 ligand 1 (PD-L1, B7-H1, CD274) is a member of the B7 family of cell surface ligands that regulate T cell activation and immune responses. The PD-L1 ligand binds the PD-1 transmembrane receptor and inhibits T cell activation. PD-L1 was discovered following a search for novel B7 protein homologs and was later shown to be expressed by antigen-presenting cells, activated T cells, and tissues including placenta, heart, and lung (1-3). Similar in structure to related B7 family members, PD-L1 protein contains extracellular IgV and IgC domains and a short, cytoplasmic region. Research studies demonstrate that PD-L1 is expressed in several tumor types, including melanoma, ovary, colon, lung, breast, and renal cell carcinomas (4-6). Expression of PD-L1 in cancer is associated with tumor infiltrating lymphocytes, which mediate PD-L1 expression through the release of interferon gamma (7). Additional research links PD-L1 expression to cancers associated with viral infections (8,9).

**Specificity/Sensitivity:** PD-L1 (E1L3N®) XP® Rabbit mAb recognizes endogenous levels of total PD-L1 protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human PD-L1 protein.

**Applications**

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<tr>
<th>Applications</th>
<th>Species Cross-Reactivity*</th>
<th>Molecular Wt.</th>
<th>Isotype</th>
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<tbody>
<tr>
<td>W, IP, IHC-P, F</td>
<td>H</td>
<td>40-50 kDa</td>
<td>Rabbit IgG**</td>
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<tr>
<td>Endogenous</td>
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**Recommended Antibody Dilutions:**

- Western blotting: 1:1000
- Immunoprecipitation: 1:50
- Immunohistochemistry (Paraffin): 1:200†
- Unmasking buffer: EDTA
- Antibody diluent: SignalStain® Antibody Diluent #8112
- Detection reagent: SignalStain® Boost (HRP, Rabbit) #8114
- Flow Cytometry: 1:400

†Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.

**Recommended Complement Products:**

- Flow Cytometry
- Immunohistochemistry (Leica® Bond™)
- Detection reagent: SignalStain® Boost

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at −20°C. Do not aliquot the antibody.

**Important:** For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Western blot analysis of extracts from KARPAS-299, SUP-M2, and PC-3 cells using PD-L1 (E1L3N®) XP® Rabbit mAb (upper) and β-Actin (D6A8) Rabbit mAb #8457 (lower).

Flow cytometric analysis of untreated SUP-M2 cells using PD-L1 (E1L3N®) XP® Rabbit mAb (blue) compared to concentration matched Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (red). Anti-rabbit IgG (H+L), F(ab')2 Fragment (Alexa Fluor® 647 Conjugate) #4414 was used as a secondary antibody.

Immunohistochemical analysis of paraffin-embedded human non-small cell lung carcinoma using PD-L1 (E1L3N®) XP® Rabbit mAb performed on the Leica® Bond™ Rx.

Western blot analysis of extracts from A549 cells, IFN-γ-treated (100 ng/mL, 48 hr, +) or untreated (-), using PD-L1 (E1L3N®) XP® Rabbit mAb (upper) or β-Actin (D6A8) Rabbit mAb #8457 (lower).

Background References: