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SignalSlide® Mouse PD-L1 IHC Controls



Cell Signaling
TECHNOLOGY®

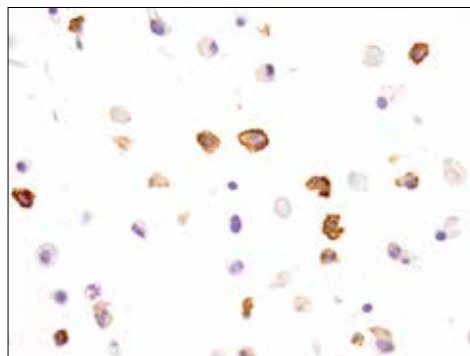
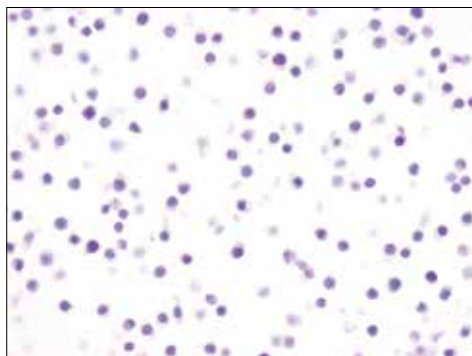
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Immunohistochemical analysis of paraffin-embedded Raw 264.7 cell pellet (left, negative) or mouse bone marrow-derived macrophage cell pellet (right, positive) using PD-L1 (D5V3B) (Mouse specific; IHC specific) Rabbit mAb #64988.

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).

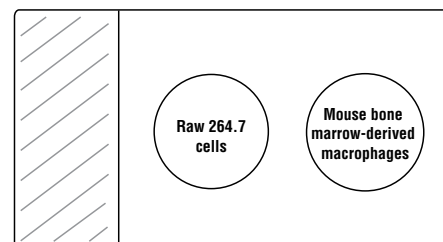
Description: Each control slide contains formalin fixed, paraffin-embedded cell pellets: Raw 264.7 (mPD-L1 negative) and mouse bone marrow-derived macrophages (mPD-L1 positive), which serve as controls for mPD-L1 immunostaining.

Storage: Store at 4°C. Optimal staining is achieved if slides are stained following CST's standard IHC protocols and are used within 8 weeks of assay date; however, signals may persist beyond two months.

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

Background References:

- (1) Dong, H. et al. (1999) *Nat Med* 5, 1365-9.
- (2) Freeman, G.J. et al. (2000) *J Exp Med* 192, 1027-34.
- (3) Liang, S.C. et al. (2003) *Eur J Immunol* 33, 2706-16.
- (4) Dong, H. et al. (2002) *Nat Med* 8, 793-800.
- (5) Thompson, R.H. et al. (2006) *Cancer Res* 66, 3381-5.
- (6) Pardoll, D.M. (2012) *Nat Rev Cancer* 12, 252-64.
- (7) Taube, J.M. et al. (2012) *Sci Transl Med* 4, 127ra37.
- (8) Lyford-Pike, S. et al. (2013) *Cancer Res* 73, 1733-41.
- (9) Chen, B.J. et al. (2013) *Clin Cancer Res* 19, 3462-73.



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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.