

## Product datasheet for **UM870091**

### PD1 (PDCD1) Mouse Monoclonal Antibody [Clone ID: UMAB199]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	UMAB199
Applications:	10k-ChIP, IF, IHC, WB
Recommended Dilution:	IHC 1:1000, WB 1:500, IF 1:100
Reactivity:	Human, Mouse, Dog, Rat
Host:	Mouse
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Full length human recombinant protein of human PDCD1 (NP_005009) produced in HEK293T cell.
Formulation:	PBS (pH 7.3) containing 1% BSA, 50% glycerol and 0.02% sodium azide.
Concentration:	0.5~1.0 mg/ml (Lot Dependent)
Purification:	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	29.2 kDa
Gene Name:	programmed cell death 1
Database Link:	<a href="#">NP_005009</a> <a href="#">Entrez Gene 18566 Mouse</a> <a href="#">Entrez Gene 301626 Rat</a> <a href="#">Entrez Gene 486213 Dog</a> <a href="#">Entrez Gene 5133 Human</a> <a href="#">Q15116</a>



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**Background:**

This gene encodes a cell surface membrane protein of the immunoglobulin superfamily. This protein is expressed in pro-B-cells and is thought to play a role in their differentiation. In mice, expression of this gene is induced in the thymus when anti-CD3 antibodies are injected and large numbers of thymocytes undergo apoptosis. Mice deficient for this gene bred on a BALB/c background developed dilated cardiomyopathy and died from congestive heart failure. These studies suggest that this gene product may also be important in T cell function and contribute to the prevention of autoimmune diseases. [provided by RefSeq, Jul

**Synonyms:**

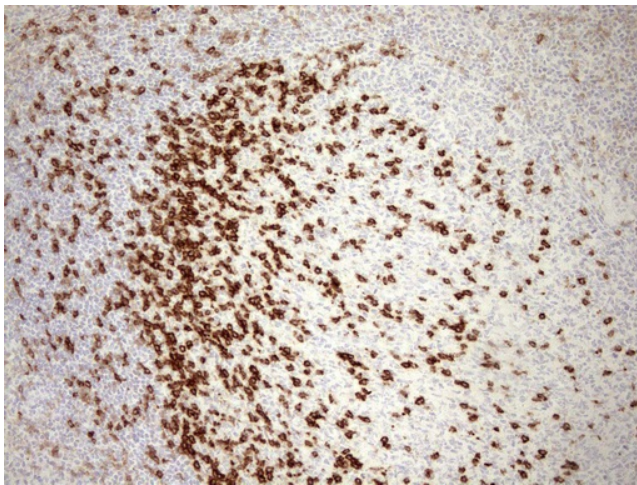
CD279; hPD-1; hPD-I; hSLE1; PD-1; PD1; SLEB2

**Protein Families:**

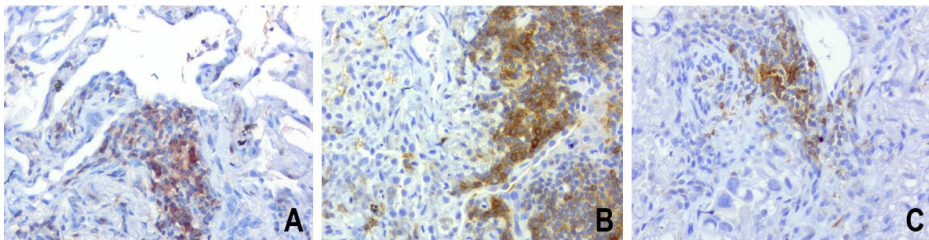
Druggable Genome, Transmembrane

**Protein Pathways:**

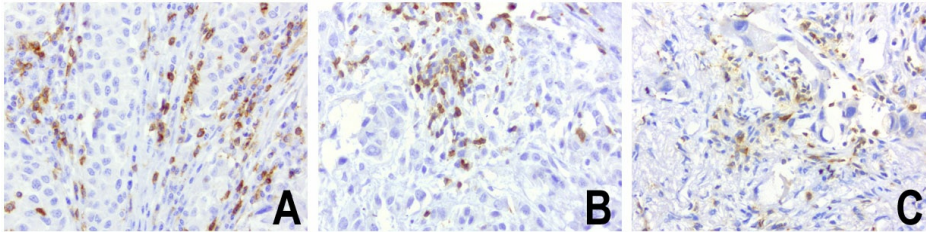
Cell adhesion molecules (CAMs), T cell receptor signaling pathway

**Product images:**


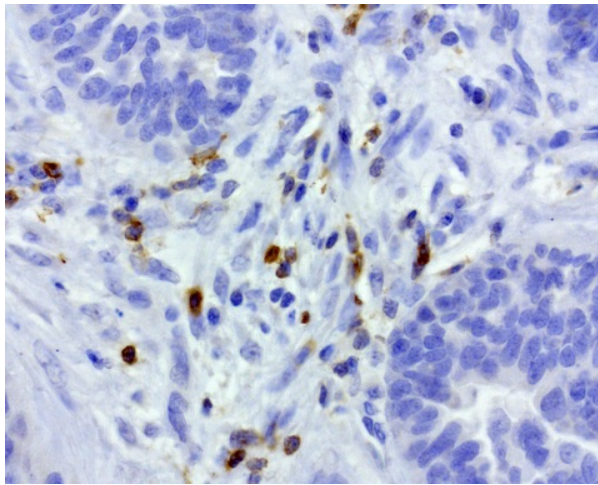
Immunohistochemical staining of paraffin-embedded Human tonsil using anti-PDCD1 mouse monoclonal antibody. (Heat-induced epitope retrieval by 1mM EDTA in 10mM Tris buffer (pH8.5) at 110°C for 10min, [UM800091]) (1:1200)



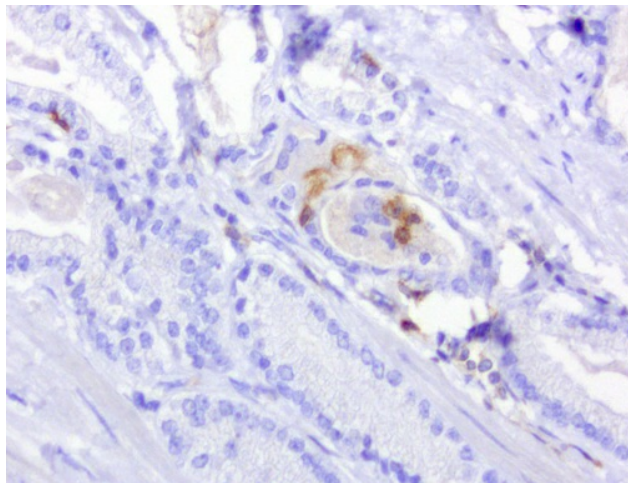
Immunohistochemical staining of 3 paraffin-embedded human lung carcinomas using anti-PD1 clone UMAB199 mouse monoclonal antibody at 1:800 requires HIER Accel [OriGene/GBI Labs [B22-125] in Pressure Chamber for 3 minute on high. Detection of primary antibody was achieved with Polink2 Broad HRP DAB [OriGene/GBI Labs D22].



Immunohistochemical staining of paraffin-embedded human melanoma using anti-PD-1 clone UMAB199 mouse monoclonal antibody at 1:800 dilution of 1mg/mL and detection with Polink2 Broad HRP DAB. [UM800091] requires heat-induced epitope retrieval with Accel for 3minutes at110C in pressure chamber. The composite image of 3 melanoma shows the tumor cells are negative for PD-1 however the activated TCells show strong membranous and cytoplasmic staining.

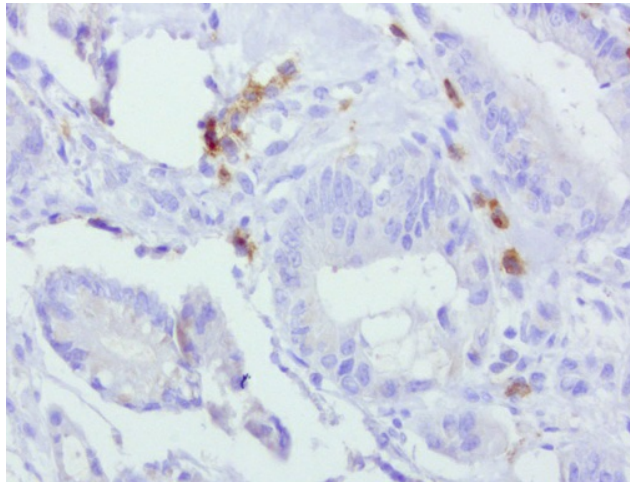


Immunohistochemical staining of paraffin-embedded human ovarian carcinoma using anti-PD-1 clone UMAB199 mouse monoclonal antibody at 1:800 dilution of 1mg/mL and detection with Polink2 Broad HRP DAB. [UM800091] requires heat-induced epitope retrieval with Accel for 3minutes at110C in pressure chamber. The image shows the tumor cells are negative for PD-1 however the activated TCells show strong membranous and cytoplasmic staining.

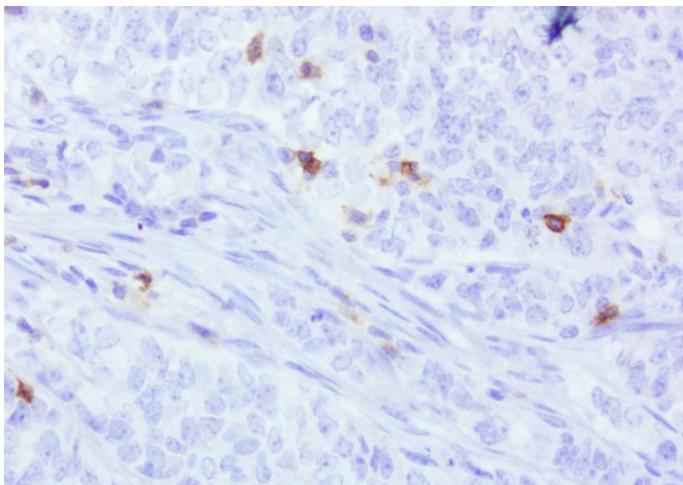


Immunohistochemical staining of paraffin-embedded human prostate carcinoma using anti-PD-1 clone UMAB199 mouse monoclonal antibody at 1:800 dilution of 1mg/mL and detection with Polink2 Broad HRP DAB. [UM800091] requires heat-induced epitope retrieval with Accel for 3minutes at110C in pressure chamber. The image shows the tumor cells are negative for PD-1 however the activated TCells show strong membranous and cytoplasmic staining.

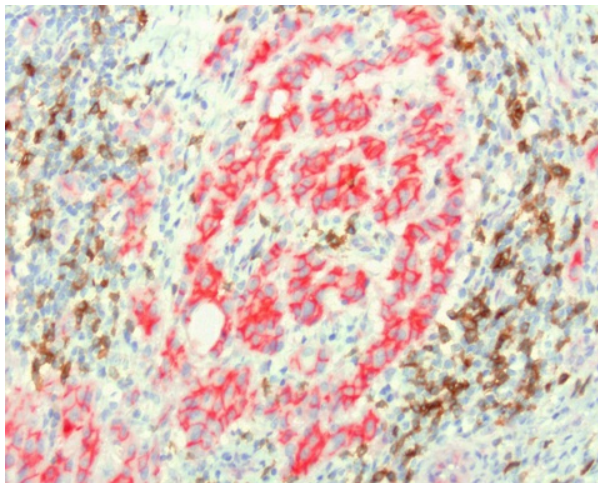




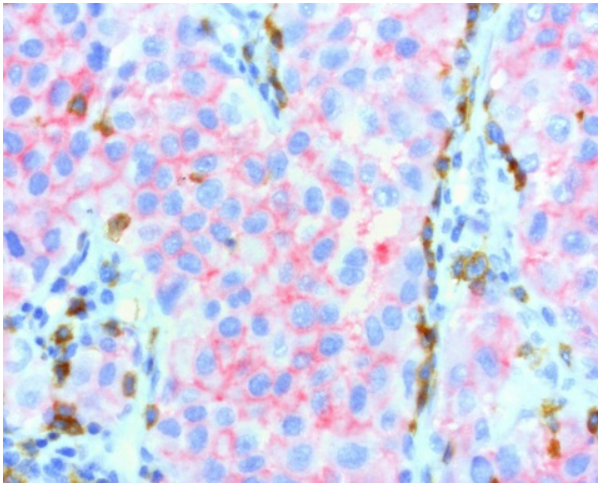
Immunohistochemical staining of paraffin-embedded human colon cancer using anti-PD-1 clone UMAB199 mouse monoclonal antibody at 1:800 dilution of 1mg/mL and detection with Polink2 Broad HRP DAB. [UM800091] requires heat-induced epitope retrieval with Accel for 3minutes at 110C in pressure chamber. The image shows the tumor cells are negative for PD-1 however the activated TCells show strong membranous and cytoplasmic staining.



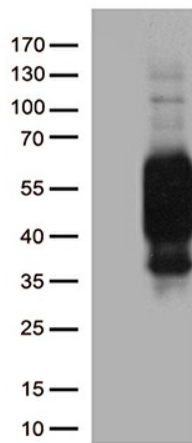
Immunohistochemical staining of paraffin-embedded human endometrial cancer using anti-PD-1 clone UMAB199 mouse monoclonal antibody at 1:800 dilution of 1mg/mL and detection with Polink2 Broad HRP DAB. [UM800091] requires heat-induced epitope retrieval with Accel for 3minutes at 110C in pressure chamber. The image shows the tumor cells are negative for PD-1 however the activated TCells show strong membranous and cytoplasmic staining.



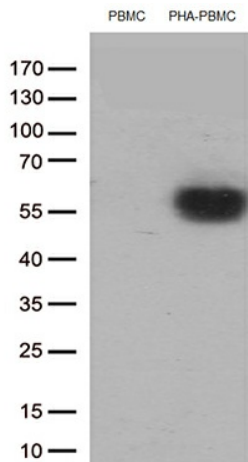
Sequential double staining of paraffin human lung using anti-b-Catenin [UM500015] (red) and anti-PD1 [UM800091] (brown). Both antibodies at 1:800 dilution of 1mg/mL. Anti-PD1: heat-induced epitope retrieval with Accel; anti-b-Catenin: citrate pH6.0. Image shows tumor cells are strongly positive for b-catenin (red) and negative for PD1. The arrows point to the activated T cells (brown) showing strong membranous and cytoplasmic staining of PD1 and no staining with b-catenin.



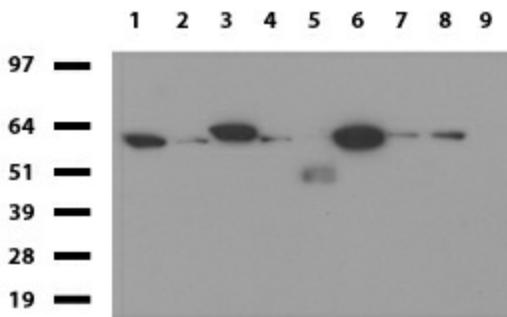
Sequential double staining of paraffin human melanoma using b-catenin [UM500015] (red) and PD1 [UM800091] (brown). Both abs at 1:800 dilution of 1mg/mL; detection with Polink2 HRP DAB followed by Polink2 Broad AP. Anti-PD1: heat-induced epitope retrieval with Accel; anti-b-catenin: citrate pH6.0. Image shows tumor cells are strongly positive for b-catenin (red) and negative for PD1. The activated T cells (brown) show strong membranous and cytoplasmic staining for PD1 and no staining with b-catenin.



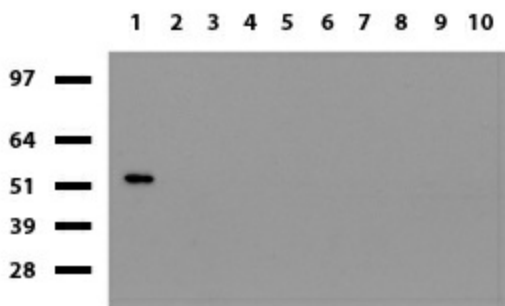
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PDCD1 (Cat# [RC210364], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PDCD1 antibody (Cat# [UM800091])(1:2000).



Western blot analysis of extracts (35ug) from PBMCs and PHA-stimulated-PBMCs by using anti-PDCD1 monoclonal antibody (1:250).



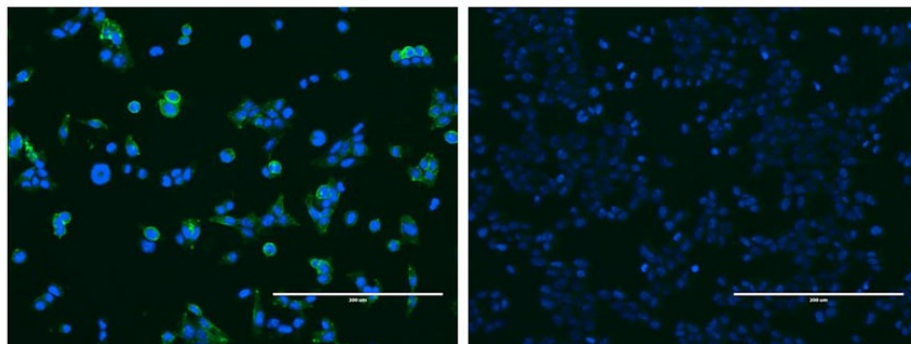
Western blot of cell lysates (35ug) from 9 different cell lines (1: HepG2, 2: HeLa, 3: SV-T2, 4: A549, 5: COS7, 6: Jurkat, 7: MDCK, 8: PC-12, 9: MCF7). Dilution: 1:500.



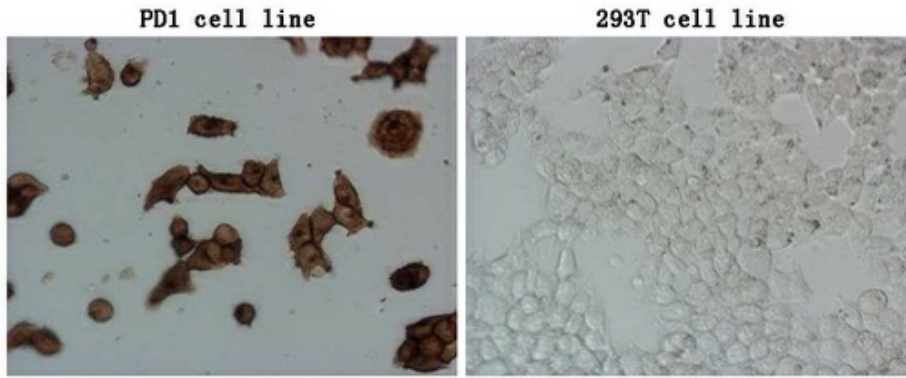
Western blot of human tissue lysates (15ug) from 10 different tissues (1: Testis, 2: Omentum, 3: Uterus, 4: Breast, 5: Brain, 6: Thyroid, 7: Colon, 8: Spleen, 9: Liver, 10: Ovary). Dilution: 1:500.

PD1 cell line

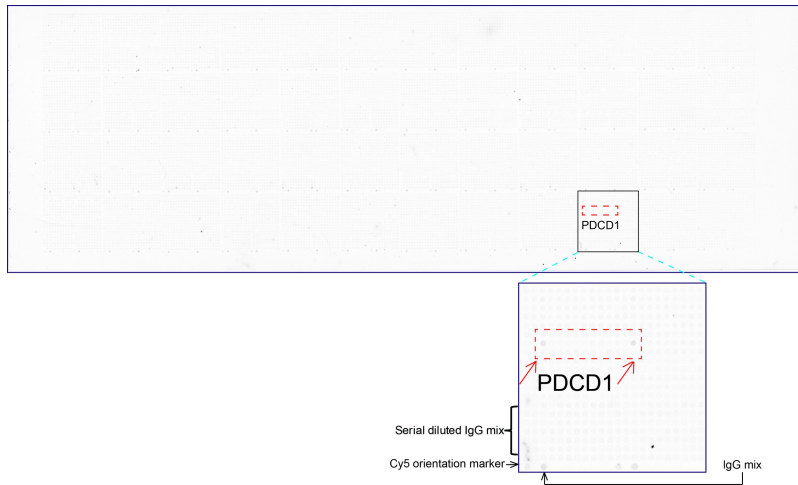
293T cell line



Immunofluorescent staining of PDCD1 ([RC210364])-stable-expression cells (left) labeling PDCD1 with mouse monoclonal antibody [UM800091] (1:100, green) and nucleus with Hoechst33342 (blue). HEK293T cells serve as negative control (right).



Immunocytochemistry staining of PDCD1 ([RC210364])-stable-expression cells (left) labeling PDCD1 with mouse anti-PDCD1 monoclonal antibody [UM800091] (1:900). The right is negative control.



OriGene overexpression protein microarray chip was immunostained with UltraMAB anti-PDCD1 mouse monoclonal antibody ([UM800091]). The positive reactive proteins are highlighted with two red arrows in the enlarged subarray. All the positive controls spotted in this subarray are also labeled for clarification (1:100).