

## Product datasheet for **UM800091**

### 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

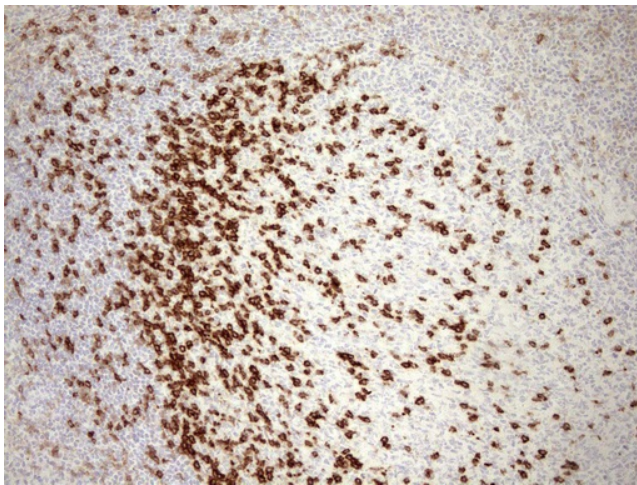
**Protein Families:**

Druggable Genome, Transmembrane

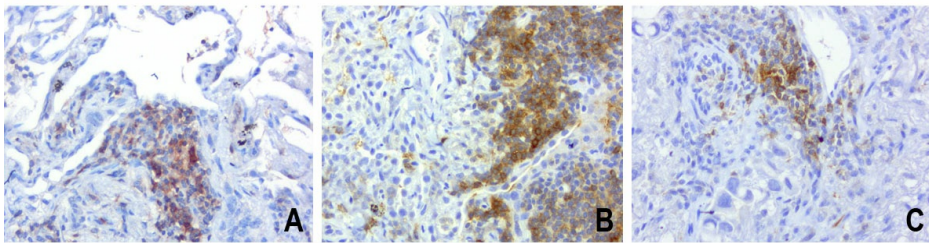
**Protein Pathways:**

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

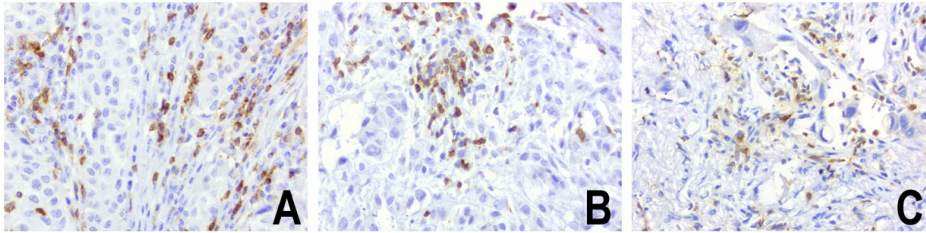
**Product images:**



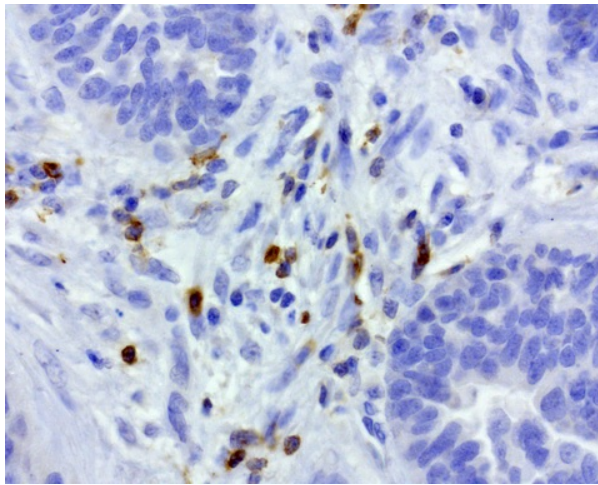
Immunohistochemical staining of paraffin-embedded Human tonsil using anti-PDCD1 mouse monoclonal antibody. (Heat-induced epitope retrieval by 1mM EDTA in 10mM Tris buffer (pH8.5) at 110°C for 10min, UM800091) (1:1200)



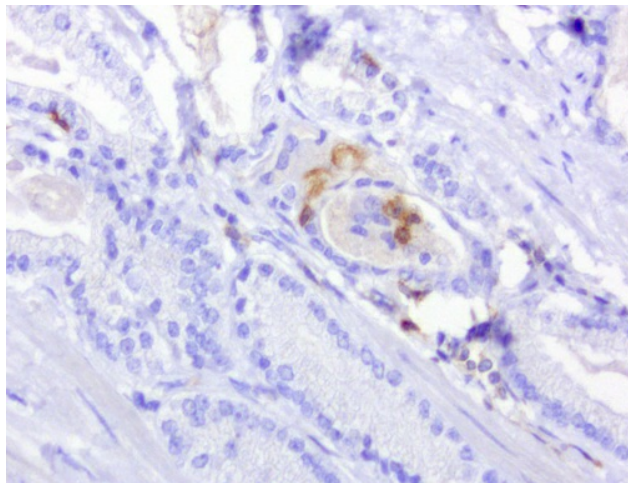
Immunohistochemical staining of 3 paraffin-embedded human lung carcinomas using anti-PD1 clone UMAB199 mouse monoclonal antibody at 1:800 requires HIER Accel [OriGene/GBI Labs [B22-125] in Pressure Chamber for 3 minute on high. Detection of primary antibody was achieved with Polink2 Broad HRP DAB [OriGene/GBI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

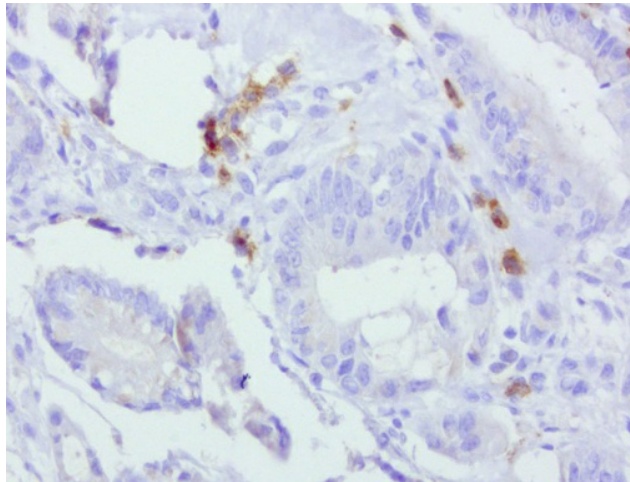


Immunohistochemical staining of paraffin-embedded human ovarian carcinoma using anti-PD-1 clone UMAB199 mouse monoclonal antibody at 1:800 dilution of 1mg/mL and detection with Polink2 Broad HRP DAB. UM800091 requires heat-induced epitope retrieval with Accel for 3minutes at110C in pressure chamber.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

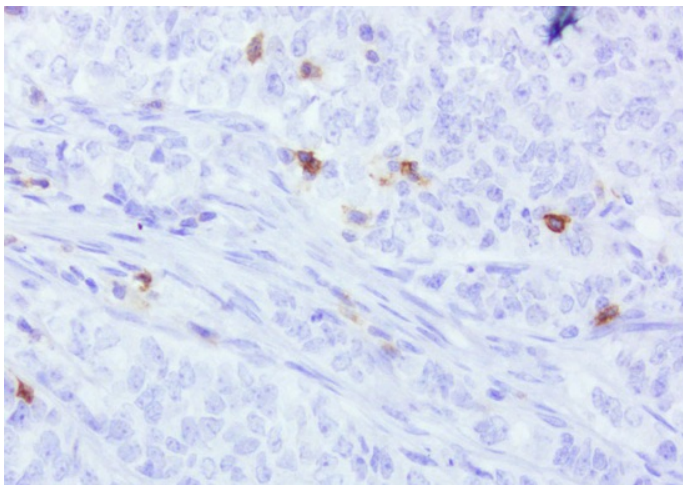


Immunohistochemical staining of paraffin-embedded human prostate carcinoma using anti-PD-1 clone UMAB199 mouse monoclonal antibody at 1:800 dilution of 1mg/mL and detection with Polink2 Broad HRP DAB. UM800091 requires heat-induced epitope retrieval with Accel for 3minutes at110C in pressure chamber.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

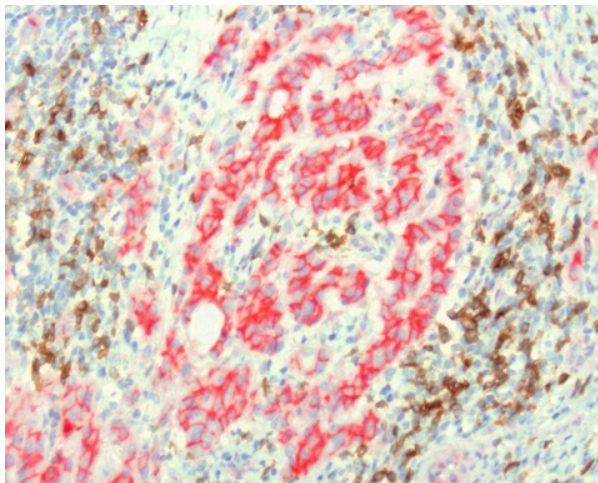




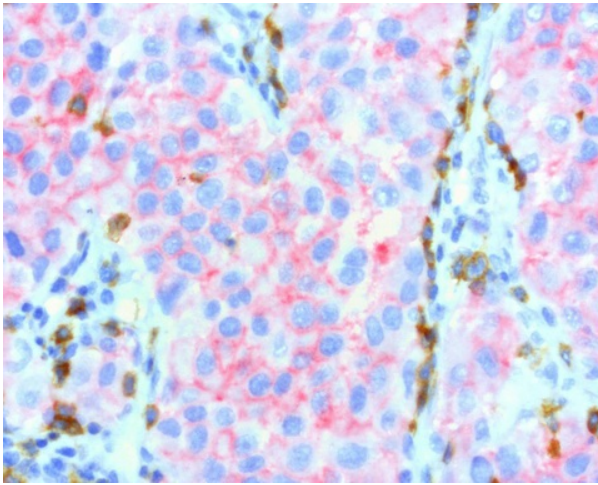
Immunohistochemical staining of paraffin-embedded human colon cancer using anti-PD-1 clone UMAB199 mouse monoclonal antibody at 1:800 dilution of 1mg/mL and detection with Polink2 Broad HRP DAB. UM800091 requires heat-induced epitope retrieval with Accel for 3minutes at 110C in pressure chamber. The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



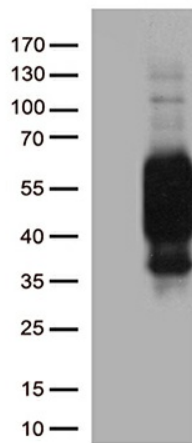
Immunohistochemical staining of paraffin-embedded human endometrial cancer using anti-PD-1 clone UMAB199 mouse monoclonal antibody at 1:800 dilution of 1mg/mL and detection with Polink2 Broad HRP DAB. UM800091 requires heat-induced epitope retrieval with Accel for 3minutes at 110C in pressure chamber.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



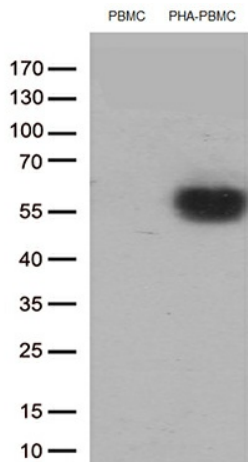
Sequential double staining of paraffin human lung using anti-b-Catenin [UM500015] (red) and anti-PD1 UM800091 (brown). Both antibodies at 1:800 dilution of 1mg/mL. Anti-PD1: heat-induced epitope retrieval with Accel; anti-b-Catenin: citrate pH6.0. Image shows tumor cells are strongly positive for b-catenin (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.



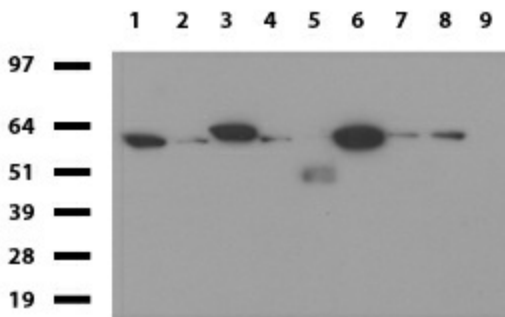
Sequential double staining of paraffin human melanoma using b-catenin [UM500015] (red) and PD1 UM800091 (brown). Both abs at 1:800 dilution of 1mg/mL; detection with Polink2 HRP DAB followed by Polink2 Broad AP. Anti-PD1: heat-induced epitope retrieval with Accel; anti-b-catenin: citrate pH6.0. Image 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.



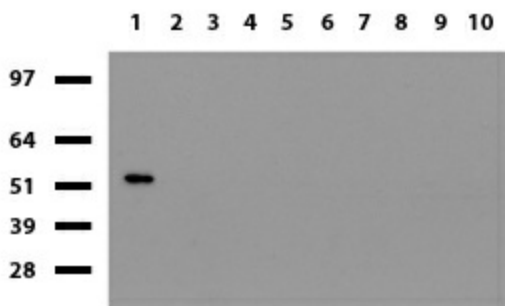
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PDCD1 (Cat# [RC210364], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PDCD1 antibody (Cat# UM800091)(1:2000).



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



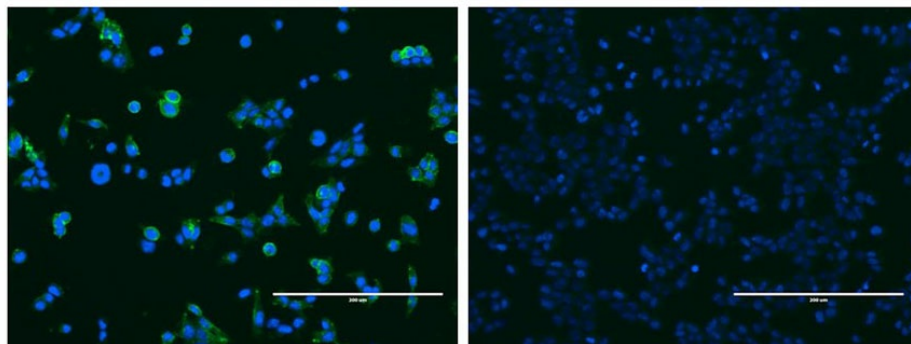
Western blot of cell lysates (35ug) from 9 different cell lines (1: HepG2, 2: HeLa, 3: SV-T2, 4: A549, 5: COS7, 6: Jurkat, 7: MDCK, 8: PC-12, 9: MCF7). Dilution: 1:500.



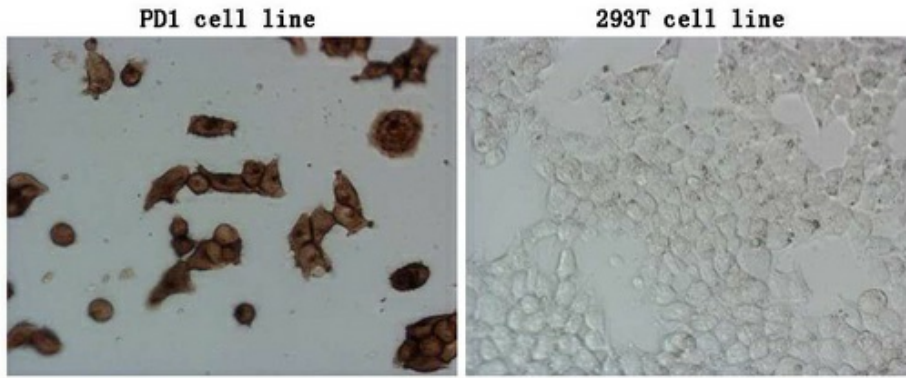
Western blot of human tissue lysates (15ug) from 10 different tissues (1: Testis, 2: Omentum, 3: Uterus, 4: Breast, 5: Brain, 6: Thyroid, 7: Colon, 8: Spleen, 9: Liver, 10: Ovary). Dilution: 1:500.

PD1 cell line

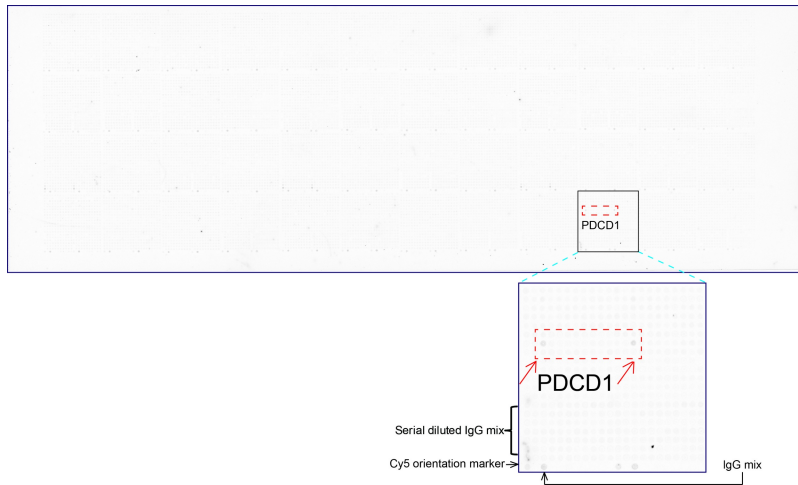
293T cell line



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).