

# Pdcd-2 (B-4): sc-377250

## BACKGROUND

Pdcd-1 (programmed cell death-1 protein) is a type I transmembrane receptor and a member of the immunoglobulin gene superfamily. Pdcd-1 contains an immunoreceptor tyrosine based inhibitory motif (ITIM) within the cytoplasmic domain, which is conserved between the mouse and human homologs. Expression of Pdcd-1 is detected in mouse thymus, and it is induced in stimulated B and T cell lines, where it may play a role in the negative regulation of various immune responses. Receptors such as Pdcd-1 function by recruiting tyrosine phosphatases, including SHP-1 and SHIP, which are responsible for altering various B cell responses. Additionally, in activated lymphocytes, Pdcd-1 mediates the activation of the classical type of programmed cell death. A related protein, Pdcd-2 (also known as PD-2, PDL2, or B7DC), is highly expressed in placenta, heart, pancreas, lung, and liver, and lowly expressed in spleen, lymph nodes, and thymus.

## REFERENCES

1. Ishida, Y., et al. 1992. Induced expression of PD-1, a novel member of the immunoglobulin gene superfamily, upon programmed cell death. *EMBO J.* 11: 3887-3895.
2. Agata, Y., et al. 1996. Expression of the PD-1 antigen on the surface of stimulated mouse T and B lymphocytes. *Int. Immunol.* 8: 765-772.
3. Ono, M., et al. 1996. Role of the inositol phosphatase SHIP in negative regulation of the immune system by the receptor FcγRIIB. *Nature* 383: 263-266.

## CHROMOSOMAL LOCATION

Genetic locus: PDCD2 (human) mapping to 6q27; Pdcd2 (mouse) mapping to 17 A2.

## SOURCE

Pdcd-2 (B-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 315-343 at the C-terminus of Pdcd-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pdcd-2 (B-4) is available conjugated to agarose (sc-377250 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377250 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377250 PE), fluorescein (sc-377250 FITC), Alexa Fluor® 488 (sc-377250 AF488), Alexa Fluor® 546 (sc-377250 AF546), Alexa Fluor® 594 (sc-377250 AF594) or Alexa Fluor® 647 (sc-377250 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377250 AF680) or Alexa Fluor® 790 (sc-377250 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377250 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

Pdcd-2 (B-4) is recommended for detection of Pdcd-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Pdcd-2 siRNA (h): sc-37483, Pdcd-2 siRNA (m): sc-37484, Pdcd-2 shRNA Plasmid (h): sc-37483-SH, Pdcd-2 shRNA Plasmid (m): sc-37484-SH, Pdcd-2 shRNA (h) Lentiviral Particles: sc-37483-V and Pdcd-2 shRNA (m) Lentiviral Particles: sc-37484-V.

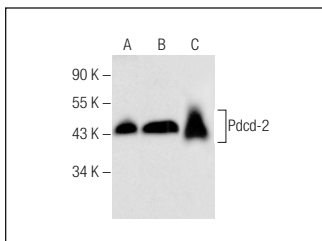
Molecular Weight of Pdcd-2: 43 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, U-698-M whole cell lysate: sc-364799 or U-2 OS cell lysate: sc-2295.

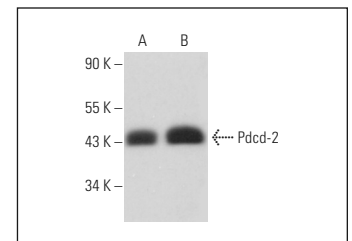
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Pdcd-2 (B-4): sc-377250. Western blot analysis of Pdcd-2 expression in U-698-M (A), U-2 OS (B) and KNRK (C) whole cell lysates.



Pdcd-2 (B-4): sc-377250. Western blot analysis of Pdcd-2 expression in AMJ2-C8 (A) and Neuro-2A (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Zhang, J., et al. 2015. Programmed cell death 2 protein induces gastric cancer cell growth arrest at the early S phase of the cell cycle and apoptosis in a p53-dependent manner. *Oncol. Rep.* 33: 103-110.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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