

# Pdcd-2 (C-20): sc-22975

## 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.
4. Vivier, E., et al. 1997. Immunoreceptor tyrosinebased inhibitory motifs. *Immunol. Today* 18: 286-291.

## CHROMOSOMAL LOCATION

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

## SOURCE

Pdcd-2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Pdcd-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22975 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Pdcd-2 (C-20) is recommended for detection of Pdcd-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Pdcd-2 (C-20) is also recommended for detection of Pdcd-2 in additional species, including canine.

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.

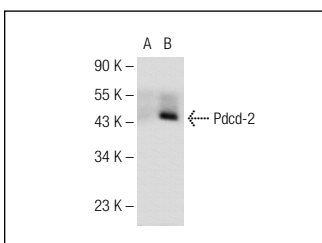
Molecular Weight of Pdcd-2: 43 kDa.

Positive Controls: Pdcd-2 (h): 293T Lysate: sc-176420 or KNRK whole cell lysate: sc-2214.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Pdcd-2 (C-20): sc-22975. Western blot analysis of Pdcd-2 expression in non-transfected: sc-117752 (A) and human Pdcd-2 transfected: sc-176420 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Athale, J., et al. 2012. Nrf2 promotes alveolar mitochondrial biogenesis and resolution of lung injury in *Staphylococcus aureus* pneumonia in mice. *Free Radic. Biol. Med.* 53: 1584-1594.

## RESEARCH USE

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