

Pdcd-1 (N-19): sc-10295

BACKGROUND

Pdcd-1 (programmed cell death-1 protein), also designated CD279, 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.

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 tyrosine-based inhibitory motifs. *Immunol. Today* 18: 286-291.
5. Nishimura, H., et al. 1999. Development of lupus-like autoimmune diseases by disruption of the PD-1 gene encoding an ITIM motif-carrying immunoreceptor. *Immunity* 11: 141-151.
6. Okazaki, T., et al. 2002. New regulatory co-receptors: inducible co-stimulator and PD-1. *Curr. Opin. Immunol.* 14: 779-782.
7. Sheppard, K.A., et al. 2004. PD-1 inhibits T cell receptor induced phosphorylation of the ZAP70/CD3ζ signalosome and downstream signaling to PKCθ. *FEBS Lett.* 574: 37-41.

CHROMOSOMAL LOCATION

Genetic locus: PDCD1 (human) mapping to 2q37.3.

SOURCE

Pdcd-1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Pdcd-1 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-10295 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Pdcd-1 (N-19) is recommended for detection of Pdcd-1 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

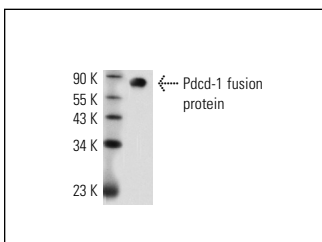
Suitable for use as control antibody for Pdcd-1 siRNA (h): sc-44002, Pdcd-1 shRNA Plasmid (h): sc-44002-SH and Pdcd-1 shRNA (h) Lentiviral Particles: sc-44002-V.

Molecular Weight of Pdcd-1: 55 kDa.

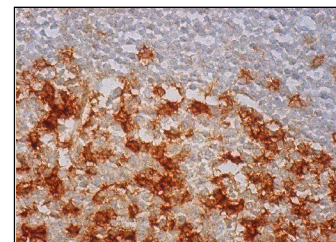
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Pdcd-1 (N-19): sc-10295. Western blot analysis of human recombinant Pdcd-1 fusion protein.



Pdcd-1 (N-19): sc-10295. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing membrane and cytoplasmic staining of cells in germinal center.

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 or our catalog for detailed protocols and support products.