

Pdcd-4 (C-16): sc-27123

BACKGROUND

The transformation suppressor gene Pdcd-4 (programmed cell death gene 4) inhibits the tumor-promoter mediated transformation of mouse keratinocytes and is a potential tumor suppressor gene in the development of human lung cancer. Biochemical analysis suggests that the Pdcd-4 protein is involved in protein translation as well as in nuclear events. Pdcd-4 directly interacts with the RNA helicase eIF4A and inhibits protein synthesis by interfering with the assembly of the cap-dependent translation initiation complex. Pdcd-4 also suppresses the transactivation of AP-1 responsive promoters by c-Jun, suggesting that the transformation-suppressor activity of Pdcd-4 might be due, at least in part, to the inhibition of c-Jun activity. In addition to affecting c-Jun phosphorylation, Pdcd-4 blocks the recruitment of the coactivator p300 by c-Jun.

CHROMOSOMAL LOCATION

Genetic locus: PDCD4 (human) mapping to 10q25.2; Pdcd4 (mouse) mapping to 19 D2.

SOURCE

Pdcd-4 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Pdcd-4 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-515648 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Pdcd-4 (C-16) is recommended for detection of Pdcd-4 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), 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).

Pdcd-4 (C-16) is also recommended for detection of Pdcd-4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Pdcd-4 siRNA (h): sc-106389, Pdcd-4 siRNA (m): sc-152123, Pdcd-4 shRNA Plasmid (h): sc-106389-SH, Pdcd-4 shRNA Plasmid (m): sc-152123-SH, Pdcd-4 shRNA (h) Lentiviral Particles: sc-106389-V and Pdcd-4 shRNA (m) Lentiviral Particles: sc-152123-V.

Molecular Weight of Pdcd-4: 54 kDa.

Positive Controls: SK-BR-3 nuclear extract: sc-2134, SK-BR-3 cell lysate: sc-2218 or Hep G2 cell lysate: sc-2227.

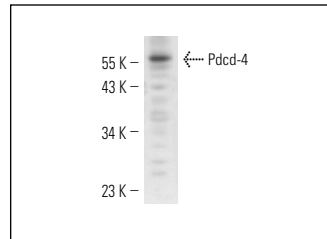
RESEARCH USE

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

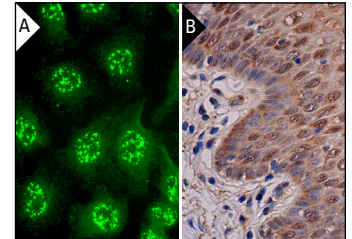
STORAGE

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

DATA



Pdcd-4 (C-16): sc-27123. Western blot analysis of Pdcd-4 expression in SK-BR-3 nuclear extract.



Pdcd-4 (C-16): sc-27123. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human vagina tissue showing nuclear and cytoplasmic staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

- Creighton, C.J., et al. 2006. Activation of mitogen-activated protein kinase in estrogen receptor α -positive breast cancer cells *in vitro* induces an *in vivo* molecular phenotype of estrogen receptor α -negative human breast tumors. *Cancer Res.* 66: 3903-3911.
- Sayed, D., et al. 2008. MicroRNA-21 targets Sprouty2 and promotes cellular outgrowths. *Mol. Biol. Cell* 19: 3272-3282.
- Shiota, M., et al. 2009. Programmed cell death protein 4 down-regulates Y-box binding protein-1 expression via a direct interaction with Twist1 to suppress cancer cell growth. *Cancer Res.* 69: 3148-3156.
- Bera, A., et al. 2014. microRNA-21-induced dissociation of PDCD4 from rictor contributes to Akt-IKK β -mTORC1 axis to regulate renal cancer cell invasion. *Exp. Cell Res.* 328: 99-117.
- Tun, A.W., et al. 2014. Profiling the mitochondrial proteome of Leber's Hereditary Optic Neuropathy (LHON) in Thailand: down-regulation of bioenergetics and mitochondrial protein quality control pathways in fibroblasts with the 11778G>A mutation. *PLoS ONE* 9: e106779.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


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Try **Pdcd-4 (B-4): sc-376430** or **Pdcd-4 (k4C1): sc-130545**, our highly recommended monoclonal alternatives to Pdcd-4 (C-16).