

Pdcd-4 (H-171): sc-292504

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 co-activator p300 by c-Jun.

REFERENCES

1. Lankat-Buttgereit, B., et al. 2003. Programmed cell death protein 4 (Pdcd-4): a novel target for antineoplastic therapy? *Biol. Cell* 95: 515-519.
2. Bohm, M., et al. 2003. The transformation suppressor protein Pdcd-4 shuttles between nucleus and cytoplasm and binds RNA. *Oncogene* 22: 4905-4910.
3. Bitomsky N., et al. 2004. Transformation suppressor protein Pdcd-4 interferes with JNK-mediated phosphorylation of c-Jun and recruitment of the coactivator p300 by c-Jun. *Oncogene* 23: 7484-93.
4. Lankat-Buttgereit B., et al. 2004. Pdcd-4 inhibits growth of tumor cells by suppression of carbonic anhydrase type II. *Mol. Cell. Endocrinol.* 214: 149-153.
5. Afonja, O., et al. 2004. Induction of PDCD4 tumor suppressor gene expression by RAR agonists, antiestrogen and HER-2/Neu antagonist in breast cancer cells. Evidence for a role in apoptosis. *Oncogene* 23: 8135-8145.
6. Goke, R., et al. 2004. Programmed cell death protein 4 (Pdcd-4) acts as a tumor suppressor in neuroendocrine tumor cells. *Ann. N.Y. Acad. Sci.* 1014: 220-221.

CHROMOSOMAL LOCATION

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

SOURCE

Pdcd-4 (H-171) is a rabbit polyclonal antibody raised against amino acids 147-317 mapping within an internal region 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.

STORAGE

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

APPLICATIONS

Pdcd-4 (H-171) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Pdcd-4 (H-171) 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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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



Try **Pdcd-4 (B-4): sc-376430** or **Pdcd-4 (k4C1): sc-130545**, our highly recommended monoclonal alternatives to Pdcd-4 (H-171).