

PDCD4 Antibody

PDCD4 (CT): Programmed cell death 4, neoplastic transformation inhibitor

CATALOG No.:3975

BACKGROUND:

Apoptosis, also known as programmed cell death, plays major roles in development and normal tissue turnover in addition to tumor formation (1 for review). During this process, the expression patterns of numerous genes are radically altered. One such gene is the programmed cell death protein 4 (PDCD4), whose expression was found to be upregulated in all cell lines following the onset of apoptosis (2). PDCD4 encodes a tumor suppressor protein whose expression is lost in carcinomas of breast, colon, lung and prostate (3). It can bind to and inhibit the helicase activity of the eukaryotic translation initiation factor 4A (4) and inhibit the transactivation and transformation mediated by the transcription factor AP-1 (5). The kinase Akt regulates PDCD4 by phosphorylation, decreasing the ability of PDCD4 to interfere with the transactivation of AP-1-responsive promoter by c-Jun (6). There are two known isoforms of PDCD4.

SOURCE:

Rabbit polyclonal PDCD4 antibody was raised against a 19 amino acid peptide from near the carboxy terminus of human PDCD4 (GenBank accession no. NP_663314).

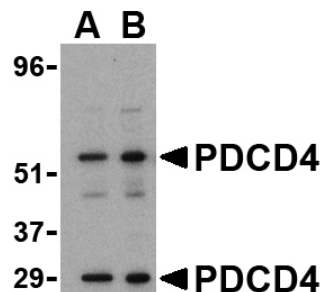
APPLICATION:

PDCD4 antibody can be used for detection of PDCD4 by Western blot at 0.5 – 1 µg/ml. (Optimal dilution should be determined by user.) A-20 cell lysate can be used as positive control. PDCD4 antibody is human, mouse and rat reactive.

For research use only.

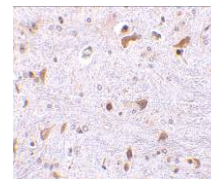
STORAGE:

PDCD4 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of PDCD4 in A-20 cell lysate with PDCD4 antibody at (A) 0.5 and (B) 1µg/ml.

Immunohistochemistry of PDCD4 in mouse brain tissue with PDCD4 antibody at 2.5 µg/ml.



RELATED PRODUCTS:

Blocking Peptide, Catalog No. **3975P**.

A-20 Cell Lysate, Catalog No. **1288**.

Akt Antibody, Catalog No. **3519**.

PD-1 Antibody (CT), Catalog No. **4065**.

REFERENCES:

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2. Shibihara K, Asano M, Ishida Y, et al. Isolation of a novel mouse gene MA-3 that is induced upon programmed cell death. *Gene* 1995; 166:297-301.
3. Goke R, Barth P, Schmidt A, et al. Programmed cell death 4 suppresses CDK1/cdc2 via induction of p21 (Waf1/Cip1). *Am. J. Physiol. Cell Physiol.* 2004; 287:C1541-6.
4. Yang HS, Jansen AP, Nair R, et al. The transformation suppressor Pdc4 is a novel translation initiation factor 4A binding protein that inhibits translation. *Mol. Cell Biol.* 2003; 23:26-37.
5. Yang HS, Jansen AP, Nair R, et al. A novel transformation suppressor, Pdc4, inhibits AP-1 transactivation but not NF-κB or ODC transactivation. *Oncogene* 2001; 20:669-76.
6. Palamarchuk A, Efanov A, Maximov V, et al. Akt phosphorylates and regulates PDCD4 tumor suppressor protein. *Cancer Res.* 2005; 65:11282-6. (08-02D)