3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Anti-PDCD4
produced in rabbit, affinity isolated antibody

Product Number **P0071**

Product Description

Anti-PDCD4 (Anti-Programmed Cell Death 4) is produced in rabbit using as immunogen a synthetic peptide corresponding to a fragment of human PDCD4 (GeneID: 27250) conjugated to KLH. The corresponding sequence is identical in mouse and rat. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-PDCD4 specifically recognizes human, mouse, and rat PDCD4. The antibody may be used in several immunochemical techniques including immunoblotting (~51 kDa) and immunoprecipitation. Staining of the PDCD4 band in immunoblotting is specifically inhibited with the immunizing peptide.

PDCD4, also known as Nuclear antigen H731-like, Protein 197/15a, and Neoplastic transformation inhibitor protein, is a tumor suppressor protein that is lost in progressed carcinomas of lung, breast, colon, and prostate. Its expression inhibits transformation in cultured cells and in mouse model of tumorigenesis.[1,2]

PDCD4 suppresses translation initiation by specifically inhibiting the helicase activity of eukaryotic translation initiation factor 4A (eIF4A), a component of the translation initiation complex,[3,4] and by competing with eIF4G, a second component of the translation initiation complex, for binding to eIF4A.[5] In response to mitogens, PDCD4 was rapidly phosphorylated on Ser^{67} by the protein kinase S6K1, and subsequently degraded via the ubiquitin ligase SCF-beta (TRCP).[6] It was also shown that the protein is specifically phosphorylated on Ser^{67} and Ser^{457} by Akt, both *in vitro* and *in vivo*. This phosphorylation causes nuclear translocation of PDCD4.[1]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2–4 μg/mL is recommended using K562 cell lysates.

Immunoprecipitation: a working amount of 5–10 μg is recommended using HEK-293T cell lysates.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Palamarchuk, A. et al., *Cancer Res.,* **65**, 11282-11286 (2005).
2. Jansen, A.P. et al., *Cancer Res.,* **65**, 6034-6041 (2005).
3. Yang, S.H, et al., *Mol. Cell. Biol.,* **23**, 26-37 (2003).
4. Yang, S.H. et al., *Mol. Cell. Biol.,* **24**, 3894-3906 (2004).
5. Suzuki, C. et al., *Proc. Natl. Acad. Sci. USA,* **105**, 3274-3279 (2008).
6. Dorrello, N.V. et al., *Science,* **314**, 467-471 (2006).

VS,SG,KAA,PHC,MAM 01/19-1