

## Product Information

### Anti-phospho-PDCD4 (pSer<sup>67</sup>)

produced in rabbit, affinity isolated antibody

Product Number: **P0072**

#### Product Description

Anti-phospho-PDCD4 (pSer<sup>67</sup>) is produced in rabbit using as immunogen a synthetic phosphopeptide corresponding to a fragment (pSer<sup>67</sup>) 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-phospho-PDCD4 (pSer<sup>67</sup>) specifically recognizes human, rat (predicted), and mouse (predicted) phospho-PDCD4 (pSer<sup>67</sup>). The antibody may be used in several immunochemical techniques including immunoblotting (~51 kDa). Staining of the phospho-PDCD4 (pSer<sup>67</sup>) band in immunoblotting is specifically inhibited with the phosphorylated immunizing peptide and not inhibited by the corresponding non-phosphorylated peptide.

Programmed cell death 4 (PDCD4) (also known as Nuclear antigen H731-like, Protein 197/15a, Neoplastic transformation inhibitor protein), is a tumor suppressor protein that is lost in progressed carcinomas of lung, breast, colon and prostate, and whose expression inhibits transformation in cultured cells and in mouse model of tumorigenesis.<sup>1,2</sup>

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

#### Reagent

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

Antibody Concentration: ~1.0 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 1–2 µg/mL is recommended using lysates of HEK-293T cells starved for 48 hr and then treated with 20% FCS.

**Immunoprecipitation:** a working amount of 5–10 µg is recommended using lysates of HEK-293T cells starved for 48 hr and then treated with 20% FCS.

**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. Nat. 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