

## Recombinant Human PDCD4

Cat. No. PDCD4-175H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human programmed cell death 4 (neoplastic transformation inhibitor) protein produced in *E. Coli* is a single, non-glycosylated polypeptide chain. The protein contains 469 amino acids and has a molecular mass of 51 kDa.

**Species** Human

**Source** E.coli

**Description** PDCD4 is restricted to the nucleus in proliferating cells. Expression of PDCD4 is modulated by cytokines in natural killer and T cells. PDCD4 takes part in apoptosis. PDCD4 is a translation inhibitor targeted for degradation during tumor promotion. PDCD4 promotes colonic neoplastic transformation and tumor invasion. PDCD4 is an important target for microRNA R-21 in breast cancer cells. Shortage of PDCD4 expression is associated with colorectal cancer. PDCD4 is swiftly phosphorylated by S6K1 kinase protein & afterwards degraded by ubiquitin ligase SCF in response to mitogens. PDCD4 in response to mitogens allows competent protein synthesis & cell growth. PDCD4 is a proapoptotic protein involved in TGF-beta1-induced apoptosis in human HCC cells, and a tumor suppressor in hepatocarcinogenesis. PDCD4 restrains tumor progression in colon carcinoma cells by the novel mechanism of down-regulating MAP4K1 transcription, with consequent inhibition of c-Jun activation and AP-1-dependent transcription.

**Amino Acid Sequence** MDVENEQILN VNPADPDNLS DSLFSGDEEN AGTTEEIKNEI NGNWISAYSI  
NEARINAKAK RRLRKNSSRD SGRGDSVSDS GSDALRSGLT VPTSPKGRLL

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DRRSRSGKGR GLPKKGGAGG KGVWGTPGQV YDVEEVDVKD PNYDDDQENC  
 VYETVVLPLD ERAFEKTLTP IIQEYFEHGD TNEVAEMLRD LNLGEMKSGV  
 PVLAVSLALE GKASHREMTS KLLSDLCGTV MSTTDVEKSF DKLLKDLPEL  
 ALDTPRAPQL VGQFIARAVG DGILCNTYID SYKGTVDCVQ ARAALDKATV  
 LLSMSKGGKR KDSVWGGSGG QQSVNHLVKE IDMLLKEYLL SGDISEAEHC  
 LKELEVPHFH HELVYEAIIM VLESTGESTF KMILDLLKSL WKSSTITVDQ  
 MKRGYERIYN EIPDINLDVP HSYSVLERFV EECFQAGIIS KQLRDLCPSR  
 GRKRFVSEGD GGRLKPESY.

**Physical Appearance** Sterile Filtered colorless solution.

**Formulation** The protein solution (1mg/ml) contains 20mM Tris-HCl pH-8, 1mM DTT and 0.1M sodium chloride.

**Purity** Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

**Stability** PDCD4 although stable 14°C for 4 weeks, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

## GENE INFORMATION

**Gene Name** [PDCD4 programmed cell death 4 \(neoplastic transformation inhibitor\) \[ Homo sapiens \]](#)

**Synonyms** H731; MGC33046; MGC33047; PDCD4; Programmed cell death protein 4; Nuclear antigen H731-like; Neoplastic transformation inhibitor protein; Protein 197/15a; programmed cell death 4; nuclear antigen H731

**Gene ID** [27250](#)

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<b>mRNA Refseq</b>	NM_014456
<b>Protein Refseq</b>	NP_055271
<b>MIM</b>	608610
<b>UniProt ID</b>	Q53EL6
<b>Chromosome Location</b>	10q24
<b>Function</b>	RNA binding; protein binding

PDB rendering based on 2ggf.



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