CDC73 Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	CDC73, Recombinant Protein
Full Product Name	Recombinant Human CDC73 Protein
Product Gene Name	CDC73 recombinant protein
Product Synonym Names	C1orf28; HRPT2; Parafibromin; Cell division cycle protein 73 homolog; Hyperparathyroidism 2 protein
Sequence	MGSSHHHHHH SSGLVPRGSH MADVLSVLRQ YNIQKKEIVV KGDEVIFGEF SWPKNVKTNY VVWGTGKEGQ PREYYTLDSI LFLLNNVHLS HPVYVRRAAT ENIPVVRRPD RKDLLGYLNG EASTSASIDR SAPLEIGLQR STQVKRAADE VLAEAKKPRI EDEECVRLDK ERLAARLEGH KEGIVQTEQI RSLSEAMSVE KIAAIKAKIM AKKRSTIKTD LDDDITALKQ RSFVDAEVDV TRDIVSRERV WRTRTTILQS TGKNFSKNIF AILQSVKARE LEHHHHHH
Host	E Coli
Species Reactivity	Human
Form/Format	Lyophilized from a 0.2 muM filtered solution of 20mM PB, 150mM NaCl, pH 7.4.
Purity/Purification	Greater than 95% as determined by reducing SDS-PAGE.
Preparation and Storage	Lyophilized protein should be stored at -20 degree C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 2-8 degree C for 2-7 days. Aliquots of reconstituted samples are stable at -20 degree C for 3 months.
Molecular Weight	60,577 Da
OMIM	AF312865 mRNA
3D Structure	ModBase 3D Structure for Q6P1J9
Endotoxin	Less than 0.1 ng/mug (1 IEU/mug) as determined by LAL test.
Directions for Use	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100 mug/ml. Dissolve the lyophilized protein in 1X PBS. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.
Applications Tested/Suitable for CDC73 recombinant protein	ELISA (EIA),Western Blot (WB), SDS-PAGE, Mass Spectrometry (MS)
Related Product Information for CDC73 recombinant protein	Recombinant Human CDC73 Protein is produced by our E Coli expression system and the target gene encoding Met1-Glu260 is expressed with a 6His tag at the N-terminus.
Other Notes	Small volumes of CDC73 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CDC73 purchase	MBS8248748 is a recombinant protein targeting CDC73. Also known as Recombinant Human CDC73 Protein. Reactive in Human. Host: E Coli.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CDC73. It may not necessarily be applicable to this product.

NCBI GI #	40018640
NCBI GeneID	79577

NCBI Accession #	NP_078805.3
UniProt Primary Accession #	Q6P1J9
UniProt Secondary Accession #	Q6PK51; Q96A07; Q9H245; Q9H5L7; A6NLZ8; B2RBR2
UniProt Related Accession #	Q6P1J9
GenBank Nucleotide #	NM_024529.4
NCBI Official Full Name	parafibromin
NCBI Official Synonym Full Names	cell division cycle 73
NCBI Official Symbol	CDC73
NCBI Official Synonym Symbols	HYX; FIHP; HPTJT; HRPT1; HRPT2; C1orf28
UniProt Protein Name	Parafibromin
UniProt Synonym Protein Names	Cell division cycle protein 73 homolog; Hyperparathyroidism 2 protein
Protein Family	Cell division control protein
UniProt Gene Name	CDC73
UniProt Synonym Gene Names	C1orf28; HRPT2
UniProt Entry Name	CDC73_HUMAN
NCBI Protein Information	parafibromin
NCBI Summary for CDC73	This gene encodes a tumor suppressor that is involved in transcriptional and post-transcriptional control pathways. The protein is a component of the the PAF protein complex, which associates with the RNA polymerase II subunit POLR2A and with a histone methyltransferase complex. This protein appears to facilitate the association of 3' mRNA processing factors with actively-transcribed chromatin. Mutations in this gene have been linked to hyperparathyroidism-jaw tumor syndrome, familial isolated hyperparathyroidism, and parathyroid carcinoma. [provided by RefSeq, Jul 2009]

UniProt Comments for CDC73	CDC73: Tumor suppressor probably involved in transcriptional and post-transcriptional control pathways. May be involved in cell cycle progression through the regulation of cyclin D1/PRAD1 expression. Component of the PAF1 complex (PAF1C) which has multiple functions during transcription by RNA polymerase II and is implicated in regulation of development and maintenance of embryonic stem cell pluripotency. PAF1C associates with RNA polymerase II through interaction with POLR2A CTD non- phosphorylated and 'Ser-2'- and 'Ser-5'-phosphorylated forms and is involved in transcriptional elongation, acting both indepentently and synergistically with TCEA1 and in cooperation with the DSIF complex and HTATSF1. PAF1C is required for transcription of Hox and Wnt target genes. PAF1C is involved in hematopoiesis and stimulates transcriptional activity of MLL1; it promotes leukemogenesis though association with MLL-rearranged oncoproteins, such as MLL-MLLT3/AF9 and MLL-MLLT1/ENL. PAF1C is involved in histone modifications such as ubiquitination of histone H2B and methylation on histone H3 'Lys-4' (H3K4me3). PAF1C recruits the RNF20/40 E3 ubiquitin-protein ligase complex and the E2 enzyme UBE2A or UBE2B to chromatin which mediate monoubiquitination of 'Lys-120' of histone H2B (H2BK120ub1); UB2A/B-mediated H2B ubiquitination is proposed to be coupled to transcription. PAF1C is involved in mRNA 3' end formation probably through association with cleavage and poly(A) factors. In case of infection by influenza A strain H3N2, PAF1C associates with viral NS1 protein, thereby regulating gene transcription. Connects PAF1C with the cleavage and polyadenylation specificity factor (CPSF) complex and the cleavage stimulation factor (CSTF) complex, and with Wnt signaling. Involved in polyadenylation of mRNA precursors. Component of the PAF1 complex, which consists of CDC73, PAF1, LEO1, CTR9, RTF1 and WDR61. Interacts with POLR2A, CPSF1, CPSF4, CSTF2, MLL and CTNNB1. Interacts with a Set1-like complex that has histone methyltransferase activity and methylates histone H3. Found in a complex with BCL9L or BCL9, CDC73, CTNNB1 and PYGO1 indicative for the participation in a nuclear Wnt signaling complex. Found in adrenal and parathyroid glands, kidney and heart. Belongs to the CDC73 family. Protein type: Cell cycle regulation; Tumor suppressor Chromosomal Location of Human Ortholog: 1q25 Cellular Component: cytoplasm; nuclear chromosome, telomeric region; nucleoplasm; nucleus Molecular Function: protein binding Biological Process: endodermal cell fate commitment; histone H2B ubiquitination; histone monoubiquitination; mRNA polyadenylation; negative regulation of cell proliferation; negative regulation of epithelial cell proliferation; negative regulation of fibroblast proliferation; negative regulation of myeloid cell differentiation; negative regulation of transcription from RNA polymerase II promoter; positive regulation of mRNA 3'-end processing; positive regulation of RNA elongation from RNA polymerase II promoter; positive regulation of transcription from RNA polymerase II promoter; positive regulation of Wnt receptor signaling pathway; protein destabilization; stem cell maintenance Disease: Parathyroid Carcinoma
Research Articles on CDC73	**1.** These findings suggest that downregulated expression of parafibromin protein plays an important role in the pathogenesis, differentiation, and metastasis of head and neck squamous cell carcinomas
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