

Active Recombinant Human CDC42 protein, His-tagged

Cat. No. CDC42-2634H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human CDC42 fused with histidine tag in the amino-terminus was expressed in E. coli.
Species	Human
Source	E.coli
Description	The protein encoded by this gene is a small GTPase of the Rho-subfamily, which regulates signaling pathways that control diverse cellular functions including cell morphology, migration, endocytosis and cell cycle progression. This protein is highly similar to <i>Saccharomyces cerevisiae</i> Cdc 42, and is able to complement the yeast <i>cdc42-1</i> mutant. The product of oncogene <i>Dbl</i> was reported to specifically catalyze the dissociation of GDP from this protein. This protein could regulate actin polymerization through its direct binding to Neural Wiskott-Aldrich syndrome protein (N-WASP), which subsequently activates Arp2/3 complex. Alternative splicing of this gene results in multiple transcript variants. Pseudogenes of this gene have been identified on chromosomes 3, 4, 5, 7, 8 and 20.
Form	2 mM Tris pH 7.6, 0.5 mM MgCl ₂ , 0.5% sucrose, 0.1% dextran.
Bio-activity	The biological activity is determined by its ability to exchange nucleotide.
Molecular Mass	~22 kDa
Purity	>90% pure

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Applications	Cdc42 biochemistry; Cdc42 GTPase assays; Cdc42 nucleotide exchange assays; Cdc42 binding studies
Reconstitution	Reconstituted in distilled water to 1 mg/ml
GENE INFORMATION	
Gene Name	CDC42 cell division cycle 42 (GTP binding protein, 25kDa) [Homo sapiens]
Official Symbol	CDC42
Synonyms	CDC42; cell division cycle 42 (GTP binding protein, 25kDa); cell division cycle 42 (GTP binding protein, 25kD); cell division control protein 42 homolog; CDC42Hs; G25K; G25K GTP-binding protein; GTP-binding protein, 25kD; growth-regulating protein; small GTP binding protein CDC42; dJ224A6.1.1 (cell division cycle 42 (GTP-binding protein, 25kD)); dJ224A6.1.2 (cell division cycle 42 (GTP-binding protein, 25kD));
Gene ID	998
mRNA Refseq	NM_001039802
Protein Refseq	NP_001034891
MIM	116952
UniProt ID	P60953
Chromosome Location	1p36.1

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Pathway	Adaptive Immune System, organism-specific biosystem; Adherens junction, organism-specific biosystem; Adherens junction, conserved biosystem; Axon guidance, organism-specific biosystem; Axon guidance, conserved biosystem; Axon guidance, organism-specific biosystem; Axon guidance, organism-specific biosystem;
Function	GTP binding; GTP-dependent protein binding; GTPase activity; GTPase activity; mitogen-activated protein kinase kinase kinase binding; nucleotide binding; protein binding; thioesterase binding;