

Active Recombinant Human CDC42 protein, GST-tagged

Cat. No. CDC42-2635H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human CDC42 fused with GST 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	Biological activity of the protein is determined by demonstrating that in GTP bound CDG01 associates with PAK protein while the GDP bound form of CDG01 does not associate with PAK protein in a pull down assay.
Molecular Mass	~50 kDa

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Purity	>90% pure
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	1p36.1

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Location	
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;

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