

Recombinant Human Cyclin-Dependent Kinase 5, GST-tagged

Cat. No. CDK5-1001H Lot. No. (See product label)

SPECIFICATION

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| Product Overview | Recombinant full-length human CDK5 was expressed in E. coli cells using a N-terminal GST tag. |
| Species | Human |
| Source | E.coli |
| Description | CDK5 is a member of the Cyclin-Dependent Kinase family that is most abundant in the mammalian brain. Active form of CDK5, which has also been called neuronal cdc2-like kinase, is a heterodimer of CDK5 and a 25 kDa protein which is derived proteolytically from a 35 kDa brain and neuron-specific protein and is essential for the kinase activity of CDK5. CDK5 has emerged as a crucial regulator of neuronal migration in the developing central nervous system. CDK5 phosphorylates a diverse list of substrates, implicating it in the regulation of a range of cellular processes - from adhesion and motility, to synaptic plasticity and drug addiction. |
| Applications | Kinase Assay; Western Blot |
| Molecular Weight | 58 kDa |
| Expression System | E. coli |
| Form | Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM PMSF, 25 % glycerol. |

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| Purity | > 90 % |
| Concentration | 0.2 ug/ul |
| Sequences | Full-length |
| Storage | Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. |
| Pathways | Alzheimer" s disease; Axon guidance; CRMPs in Sema3A signaling; DARPP-32 events; EPHA forward signaling; Factors involved in megakaryocyte development and platelet production; Glucocorticoid receptor regulatory network; Hemostasis; IL-6 Signaling Pathway; Lissencephaly gene (LIS1) in neuronal migration and development; Nicotine Activity on Dopaminergic Neurons; Opioid Signalling; Reelin signaling pathway; Semaphorin interactions; Trk receptor signaling mediated by the MAPK pathway |

GENE INFORMATION

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| Gene Name | CDK5 cyclin-dependent kinase 5 [Homo sapiens] |
| Official Symbol | CDK5 |
| Synonyms | CDK5; cyclin-dependent kinase 5; PSSALRE; cyclin-dependent kinase 5; OTTHUMP00000212917; OTTHUMP00000212939; TPKII catalytic subunit; protein kinase CDK5 splicing; cell division protein kinase 5; serine/threonine-protein kinase PSSALRE; tau protein kinase II catalytic subunit; Cyclin-dependent kinase 5; EC 2.7.11.22; Serine/threonine-protein kinase PSSALRE; Tau protein kinase II catalytic subunit; TPKII catalytic subunit |

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| Gene ID | 1020 |
| mRNA Refseq | NM_001164410 |
| Protein Refseq | NP_001157882 |
| MIM | 123831 |
| UniProt ID | Q00535 |
| Chromosome Location | 7q36 |
| Function | ATP binding; ErbB-2 class receptor binding; acetylcholine receptor activator activity; cyclin-dependent protein kinase activity; kinase activity; nucleotide binding; p53 binding; protein binding; protein kinase activity; protein serine/threonine kinase activity; tau-protein kinase activity |
| PDB rendering based on | 1h41. |

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