# 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 |

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