

Bioactive

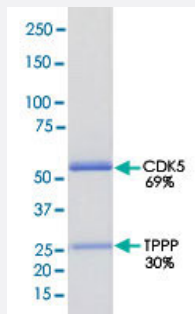
Full-Length

CDK5/CDK5R1 (Human) Recombinant Protein

Catalog # P5691

Size 5 ug

Applications



Result of activity analysis

Result of activity analysis

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Specification

Product Description	Human CDK5 (NP_004926.1, 1 a.a. - 292 a.a.) full-length recombinant protein with GST tag co-expressed with CDK5R1 (NP_003876.1, 99 a.a. - 307 a.a.) expressed in Baculovirus infected Sf21 cells.
Host	insect
Theoretical MW (kDa)	60
Form	Liquid
Preparation Method	Baculovirus expression system
Purification	Glutathione sepharose chromatography and anion exchange chromatography
Purity	99 % by SDS-PAGE/CBB staining.

Activity	The activity was measured by off-chip mobility shift assay. The enzyme was incubated with fluorescence-labeled substrate and Mg (or Mn)/ATP. The phosphorylated and unphosphorylated substrates were separated and detected by LabChip™3000. Substrate : Modified Histone H1. ATP: 100 µM.
Quality Control Testing	Loading 1 ug protein in SDS-PAGE
Storage Buffer	In 50 mM Tris-HCl, 150 mM NaCl, pH 7.5 (0.05% Brij35, 1 mM DTT, 10% glycerol)
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Result of activity analysis Result of activity analysis

Applications

- Functional Study
- SDS-PAGE

Gene Info — CDK5

Entrez GeneID	1020
Protein Accession#	NP_004926.1 (Gene ID : 1020) ; NP_003876.1 (Gene ID : 8851)
Gene Name	CDK5
Gene Alias	PSSALRE
Gene Description	cyclin-dependent kinase 5
Omim ID	123831
Gene Ontology	Hyperlink
Other Designations	protein kinase CDK5 splicing

Gene Info — CDK5R1

Entrez GeneID	8851
Protein Accession#	NP_004926.1 (Gene ID : 1020) ; NP_003876.1 (Gene ID : 8851)

Gene Name	CDK5R1
Gene Alias	CDK5P35, CDK5R, MGC33831, NCK5A, p23, p25, p35, p35nck5a
Gene Description	cyclin-dependent kinase 5, regulatory subunit 1 (p35)
Omim ID	603460
Gene Ontology	Hyperlink
Gene Summary	The protein encoded by this gene (p35) is a neuron-specific activator of cyclin-dependent kinase 5 (CDK5); the activation of CDK5 is required for proper development of the central nervous system. The p35 form of this protein is proteolytically cleaved by calpain, generating a p25 form. The cleavage of p35 into p25 results in relocalization of the protein from the cell periphery to nuclear and perinuclear regions. P25 deregulates CDK5 activity by prolonging its activation and changing its cellular location. The p25 form accumulates in the brain neurons of patients with Alzheimer's disease. This accumulation correlates with an increase in CDK5 kinase activity, and may lead to aberrantly phosphorylated forms of the microtubule-associated protein tau, which contributes to Alzheimer's disease. [provided by RefSeq]
Other Designations	CDK5 activator 1 TPKII regulatory subunit cyclin-dependent kinase 5 activator 1 cyclin-dependent kinase 5, regulatory subunit 1 neuronal CDK5 activator regulatory partner for CDK5 kinase tau protein kinase II 23kDa subunit

Pathway

- [Axon guidance](#)

Disease

- [Adenocarcinoma](#)
- [Alzheimer disease](#)
- [Alzheimer disease](#)
- [Cardiovascular Diseases](#)
- [Cardiovascular Diseases](#)
- [Diabetes Mellitus](#)
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- [Disease Models](#)
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- [Esophageal Neoplasms](#)
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- [Pulmonary Disease](#)
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- [Urinary Bladder Neoplasms](#)
- [Werner syndrome](#)