



# Recombinant Protein Technical Manual

## Recombinant Human CDK5 Protein (GST Tag)

RPES2558

### Product Data:

**Product SKU:** RPES2558

**Size:** 50µg

**Species:** Human

**Expression host:** Baculovirus-Insect Cells

**Uniprot:** NP\_004926.1

### Protein Information:

**Molecular Mass:** 59.6 kDa

**AP Molecular Mass:** 59.6 kDa

**Tag:** N-GST

**Bio-activity:**

**Purity:** > 94 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, 0.5mM GSH, pH 7.0

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** PSSALRE

## Immunogen Information:

**Sequence:** Met 1-Pro 292

## Background:

Cell division protein kinase 5, also known as Cyclin-dependent kinase 5, Serine/threonine-protein kinase PSSALRE, Tau protein kinase II catalytic subunit, TPKII catalytic subunit and CDK5, is a cytoplasm protein which belongs to the protein kinase superfamily, CMGC Ser/Thr protein kinase family and CDC2 / CDKX subfamily. Cyclin-dependent kinases (Cdk5) are a family of proline-directed Ser/Thr kinases known for their role in the control of cell cycle progression. In 1992, this family was joined by CDK5, which is an atypical member in that it uses its own activators and is multifunctional, playing important regulatory roles in multiple cellular functions. CDK5, unlike other Cdk5, is not regulated by cyclins, and its activity is primarily detected in postmitotic neurons in developing and adult nervous systems. CDK5 is activated by association with a neuron-specific activator, p35 or its isoform p39. CDK5 is probably involved in the control of the cell cycle. It interacts with D1 and D3-type G1 cyclins. CDK5 can phosphorylate histone H1, tau, MAP2 and NF-H and NF-M. It also interacts with p35 which activates the kinase. CDK5 plays important roles in various neuronal activities, including neuronal migration, synaptic activity, and neuronal cell death.