

## Recombinant Human CDK4 protein, His/T7-tagged

**Cat. No.** CDK4-938H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human CDK4(Met1-Glu303) fused with His/T7 tag at N-terminal was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>ProteinLength</b>    | Met1-Glu303                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | Cyclin-Dependent Kinase 4 (CDK4) is a member of the CMGC Ser/Thr protein kinase family and CDC2/CDKX subfamily. CDK4 is a component of Cyclin D-CDK4 (DC) complexes that phosphorylate and inhibit members of the retinoblastoma (RB) protein family including RB1 and regulate the cell-cycle during G1/S transition. These complexes are major integrators of various mitogenenic and antimitogenic signals. It is shown that CDK4 is responsible for the phosphorylation of retinoblastoma gene product (Rb). Defects in CDK4 are a cause of susceptibility to cutaneous Malignant Melanoma Type 3. |
| <b>Form</b>             | Lyophilized from a 0.2 µm filtered solution of 20mM PB,150mM NaCl,pH7.4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>AA Sequence</b>      | MGSSHHHHHHSSGLVPRGSHMASMTGGQQMGRGSMATSRYPVAEIGVGAYGT<br>VYKARDPHSGHF VALKSVRVPNGGGGGGGLPISTVREVALLRLEAFEHPNVVRL<br>MDVCATSRTDREIKVTLVFEHV DQDLRTYLDKAPPPGLPAETIKDLMRQFLRGLDFL<br>HANCIVHRDLKPENILVTSGGTVKLADFGF ARIYSYQMALTPVVVTLWYRAPEVLLQ<br>STYATPVDMMWSVGCIFAEMFRRKPLFCGNSEADQLGKI FDLIGLPPEDDWPRDVSL                                                                                                                                                                                                                                                                                              |

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|                       |                                                                                                                                                                                                                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | PRGAFPPRGPRPVQSVPEMEESGAQLLLEMLTFNPHKRISAFRALQ HSYLHKDEG<br>NPE                                                                                                                                                                                                                                     |
| <b>Endotoxin</b>      | Less than 0.1 ng/g (1 IEU/g) as determined by LAL test.                                                                                                                                                                                                                                             |
| <b>Purity</b>         | Greater than 95% as determined by reducing SDS-PAGE.                                                                                                                                                                                                                                                |
| <b>Storage</b>        | Lyophilized protein should be stored at < -20 centigrade, though stable at room temperature for 3 weeks.<br>Reconstituted protein solution can be stored at 4-7 centigrade for 2-7 days.<br>Aliquots of reconstituted samples are stable at < -20 centigrade for 3 months.                          |
| <b>Reconstitution</b> | Always centrifuge tubes before opening. Do not mix by vortex or pipetting.<br>It is not recommended to reconstitute to a concentration less than 100 µg/ml.<br>Dissolve the lyophilized protein in ddH <sub>2</sub> O.<br>Please aliquot the reconstituted solution to minimize freeze-thaw cycles. |
| <b>Shipping</b>       | The product is shipped at ambient temperature.                                                                                                                                                                                                                                                      |

## GENE INFORMATION

|                        |                                                                                                  |
|------------------------|--------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | CDK4 cyclin-dependent kinase 4 [ Homo sapiens ]                                                  |
| <b>Official Symbol</b> | CDK4                                                                                             |
| <b>Synonyms</b>        | CDK4; cyclin-dependent kinase 4; PSK J3; cell division protein kinase 4; CMM3; PSK-J3; MGC14458; |
| <b>Gene ID</b>         | 1019                                                                                             |
| <b>mRNA Refseq</b>     | NM_000075                                                                                        |

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|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Protein Refseq</b>      | <a href="#">NP_000066</a>                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>MIM</b>                 | <a href="#">123829</a>                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>UniProt ID</b>          | <a href="#">P11802</a>                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Chromosome Location</b> | 12q13                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Pathway</b>             | ATF-2 transcription factor network, organism-specific biosystem; B Cell Receptor Signaling Pathway, organism-specific biosystem; Bladder cancer, organism-specific biosystem; Bladder cancer, conserved biosystem; Calcineurin-regulated NFAT-dependent transcription in lymphocytes, organism-specific biosystem; Cell Cycle, organism-specific biosystem; Cell Cycle, Mitotic, organism-specific biosystem; |
| <b>Function</b>            | ATP binding; cyclin-dependent protein kinase activity; nucleotide binding; protein binding; protein kinase activity;                                                                                                                                                                                                                                                                                          |

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