

# Recombinant Active Human CDK12/Cyclin K Complex Protein, GST-tagged

**Cat. No.** CDK12-07H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human CDK12 (658-end) /Cyclin K complex was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag on both proteins.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Source</b>           | Insect Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>ProteinLength</b>    | 658-end a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | Cyclin-dependent kinase that phosphorylates the C-terminal domain (CTD) of the large subunit of RNA polymerase II (POLR2A), thereby acting as a key regulator of transcription elongation. Regulates the expression of genes involved in DNA repair and is required for the maintenance of genomic stability. Preferentially phosphorylates 'Ser-5' in CTD repeats that are already phosphorylated at 'Ser-7', but can also phosphorylate 'Ser-2'. Required for RNA splicing, possibly by phosphorylating SRSF1/SF2. Involved in regulation of MAP kinase activity, possibly leading to affect the response to estrogen inhibitors. |
| <b>Molecular Mass</b>   | CDK12: Approx 135 kDa<br>CyclinK: Approx 67 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Purity</b>           | > 85%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Stability</b>        | One year at -70 centigrade from data of shipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

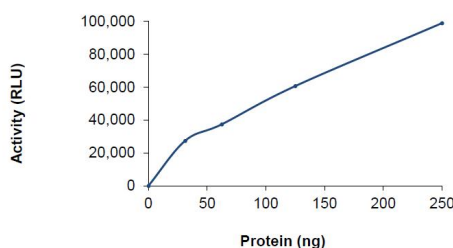
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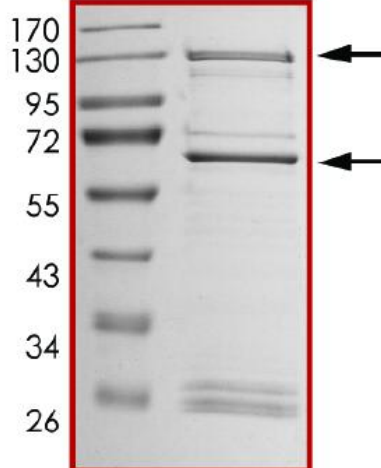
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|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage</b>          | Store product at –70 centigrade. 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.     |
| <b>Concentration</b>    | 0.05 µg/µL                                                                                                                                                                                                                                           |
| <b>Storage Buffer</b>   | Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 25% glycerol.                                                                                                                        |
| <b>Shipping</b>         | Dry ice                                                                                                                                                                                                                                              |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                      |
| <b>Gene Name</b>        | CDK12 cyclin dependent kinase 12 [ Homo sapiens (human) ]                                                                                                                                                                                            |
| <b>Official Symbol</b>  | CDK12                                                                                                                                                                                                                                                |
| <b>Synonyms</b>         | CDK12; cyclin dependent kinase 12; cyclin-dependent kinase 12; CDC2-related protein kinase 7; Cdc2-related kinase, arginine/serine-rich; cell division cycle 2-related protein kinase 7; cell division protein kinase 12; EC 2.7.11.22; EC 2.7.11.23 |
| <b>Gene ID</b>          | 51755                                                                                                                                                                                                                                                |
| <b>mRNA Refseq</b>      | NM_015083                                                                                                                                                                                                                                            |
| <b>Protein Refseq</b>   | NP_055898                                                                                                                                                                                                                                            |
| <b>MIM</b>              | 615514                                                                                                                                                                                                                                               |
| <b>UniProt ID</b>       | Q9NYV4                                                                                                                                                                                                                                               |

### Specific Activity



The specific activity of CDK12/CyclinK was determined to be 2.2 nmol/min/mg as per activity assay protocol.

### Purity



The purity of CDK12/CyclinK was determined to be > 85 % by densitometry.