

## Product datasheet for **TP504375**

### Cdk7 (BC004605) Mouse Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse cyclin-dependent kinase 7 (homolog of Xenopus MO15 cdk-activating kinase) (cDNA clone MGC:6069 IMAGE:3585145),, with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>MR204375 protein sequence <span style="color: red;">Red</span> =Cloning site <span style="color: green;">Green</span> =Tags(s)  MAVDVKSRAKRYEKLDLFLGEGQFATVYKARDKNTNQIVAIAKKIKLGHRSEAKDGINRTALREIKLLQELS HPNIIGLLDAFGHKSNI SLVDFMETDLEDLKPNLLLDENGVLKLADFLAKSFGSPNRAYTHQVWTRW YRAPELLFGARMYGVGVDMWAVGCILAELLRPFLPGDSDLQLTRIFETLGTPTEEQWPDMCSLPDYV TFKSFPGVPLQHIFIAAGDDLLELIQGLFLNPCTRTTASQALKTKYFSNRPGPTPGCQLPRPNCPEAL KEPANPTVATKRKRAEALQILPKKLIF  <span style="color: red;">TR</span> <span style="color: green;">TRPLEQKLISEEDLAANDILDYKDDDDKV</span>
Tag:	C-MYC/DDK
Predicted MW:	34.6 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C after receiving vials.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Locus ID:	12572
UniProt ID:	<u><a href="#">Q03147</a></u>
RefSeq Size:	1170


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<b>Cytogenetics:</b>	13 53.23 cM
<b>RefSeq ORF:</b>	927
<b>Synonyms:</b>	AI323415; AI528512; C230069N13; Cdkn7; Crk4
<b>Summary:</b>	<p>Serine/threonine kinase involved in cell cycle control and in RNA polymerase II-mediated RNA transcription. Cyclin-dependent kinases (CDKs) are activated by the binding to a cyclin and mediate the progression through the cell cycle. Each different complex controls a specific transition between 2 subsequent phases in the cell cycle. Required for both activation and complex formation of CDK1/cyclin-B during G2-M transition, and for activation of CDK2/cyclins during G1-S transition (but not complex formation). CDK7 is the catalytic subunit of the CDK-activating kinase (CAK) complex. Phosphorylates SPT5/SUPT5H, SF1/NR5A1, POLR2A, p53/TP53, CDK1, CDK2, CDK4, CDK6 and CDK11B/CDK11. CAK activates the cyclin-associated kinases CDK1, CDK2, CDK4 and CDK6 by threonine phosphorylation, thus regulating cell cycle progression. CAK complexed to the core-TFIIF basal transcription factor activates RNA polymerase II by serine phosphorylation of the repetitive C-terminal domain (CTD) of its large subunit (POLR2A), allowing its escape from the promoter and elongation of the transcripts. Phosphorylation of POLR2A in complex with DNA promotes transcription initiation by triggering dissociation from DNA. Its expression and activity are constant throughout the cell cycle. Upon DNA damage, triggers p53/TP53 activation by phosphorylation, but is inactivated in turn by p53/TP53; this feedback loop may lead to an arrest of the cell cycle and of the transcription, helping in cell recovery, or to apoptosis. Required for DNA-bound peptides-mediated transcription and cellular growth inhibition. [UniProtKB/Swiss-Prot Function]</p>