

# Certificate of Analysis

## CDC7

Cell division cycle 7 homolog

Recombinant Human Protein Kinase

HGNC Symbol: CDC7

**Synonyms:** CDC7L1, HsCdc7, HsCDC7, Hsk1, huCdc7

**Product No.:** 1513-0000-1

**Lot:** 002

**Description:** Human CDC7, full length, amino acids M<sub>1</sub>-L<sub>574</sub> (as in NCBI/Protein entry NP\_003494.1), N-terminal GST-HIS<sub>6</sub> fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

**Theoretical MW**<sub>GST-CDC7</sub>: 91,978 Da

**Expression:** Baculovirus infected Sf9 cells

**Purification:** GST-Affinity Chromatography

**Activation:** This kinase was not activated by special procedures

**Storage buffer:** 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20% glycerol

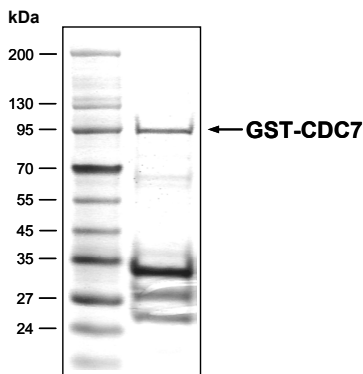
**Storage temperature:** -80°C

For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

**Protein concentration:** 0.469 µg/µl (Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

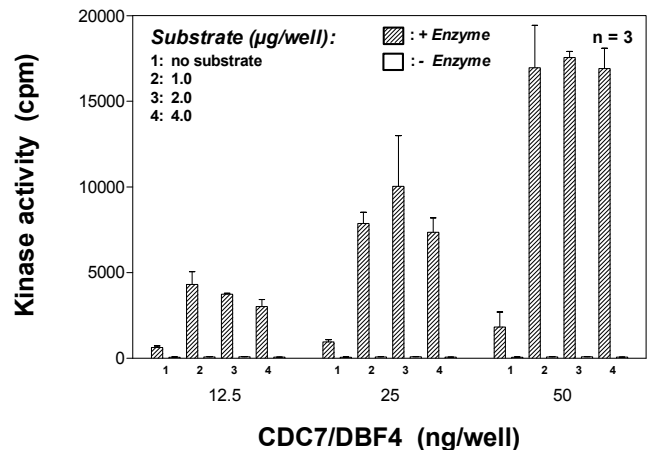
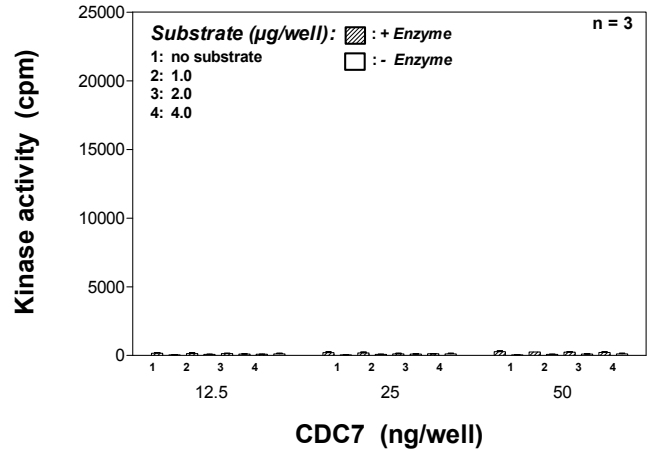
### CDC7 Lot 002:

#### Coomassie stain



2.0 µg GST-CDC7

### Kinase activity CDC7 vs CDC7/DBF4:



#### Final assay concentrations:

- 60 mM HEPES-NaOH, pH 7.5
- 3 mM MgCl<sub>2</sub>
- 3 mM MnCl<sub>2</sub>
- 3 µM Na-orthovanadate
- 1.2 mM DTT
- 50 µg / ml PEG<sub>20,000</sub>
- 1 µM ATP
- Substrate: Histone H1, 2.5-10 µg/ml
- Kinase: CDC7 or CDC7/DBF4 0.25-1 µg/ml]

#### Assay: <sup>33</sup>PanQinase® Assay

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CoA V.1.1 CDC7\_Lot002\_V1.doc

## CDC7

Product No.: 1513-0000-1

CDC7 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHH	RDSLEVL	240
241	MEASLGIQ	DEPMAFSPQR	DRFQAEGLK	KNEQNFKLAG	VKVDIEKLYE	AVPQLSNVFK	300
301	IEDKIGEGTF	SSVYLATAQL	QVGPEEKIAL	KHLIPTSHPI	RIAAELQCLT	VAGGQDNVMG	360
361	VKYCFRKN	VVIAMPYLEH	ESFLDILNSL	SFQEVREYML	NLFKALKRIH	QFGIVHRDVK	420
421	PSNFLYNRRL	KKYALVDFGL	AQGTHDTKIE	LLKFVQSEAO	QERCSONKSH	IITGNKIPLS	480
481	GPVPKELDQ	STTKASVKRP	YTNAQIQIKQ	GKDGKEGSVG	LSVQRSVFGE	RNFNIHSSIS	540
541	HESPAVKLMK	QSKTVDVLSR	KLATKKKAIS	TKVMNSAVMR	KTASSCPASL	TCDCYATDKV	600
601	CSICLSRRQ	VAPRAGTPGF	RAPEVLTKCP	NQTTAIDMWS	AGVIFLSLLS	GRYPFYKASD	660
661	DLTALAQIMT	IRGSRETIQA	AKTFGKSILC	SKEVPAQDLR	KLCERLRGMD	SSTPKLTSDI	720
721	QGHASHQPAI	SEKTDHKASC	LVQTPPGQYS	GNSFKKGDSN	SCEHCDFEYN	TNLEGWNEVP	780
781	DEAYDLLDKL	LDLNPASRIT	AEALLHPFF	KDMSL			840

1-218: GST    Red: HIS6-tag    Green: 3C cleavage site    blue: CDC7

CDC7 wt <sup>1</sup> Amino Acid Sequence							
1	MEASLGIQMD	EPMAFSPQRD	RFQAEGLSKK	NEQNFKLAGV	KVDIEKLYEA	VPQLSNVFKI	60
61	EDKIGEGTFS	SVYLATAQLQ	VGPEEKIALK	HLIPTSHPIR	IAAELQCLTV	AGGQDNVMGV	120
121	KYCFRKN	VIAMPYLEHE	SFLDILNSLS	FQEVREYMLN	LFKALKRIHQ	FGIVHRDVKP	180
181	SNFLYNRRLK	KYALVDFGLA	QGTHDTKIEL	LKFVQSEAOQ	ERCSQNKSHI	ITGNKIPLSG	240
241	PVPKELDQ	TTKASVKRPY	TNAQIQIKQ	KDGKEGSVGL	SVQRSVFGER	NFNIHSSISH	300
301	ESPAVKLMKQ	SKTVDVLSRK	LATKKKAIST	KVMNSAVMRK	TASSCPASLT	CDCYATDKVC	360
361	SICLSRRQV	APRAGTPGFR	APEVLTKCPN	QTTAIDMWSA	GVIFLSLLSG	RYPFYKASDD	420
421	LTALAQIMTI	RGSRETIQAA	KTFGKSILCS	KEVPAQDLRK	LCERLRGMDS	STPKLTSDIQ	480
481	GHASHQPAIS	EKTDHKASCL	VQTPPGQYSG	NSFKKGDSNS	CEHCDFEYNT	NLEGWNEVPD	540
541	EAYDLLDKLL	DLNPASRITA	EEALLHPFFK	DMSL			600

blue: CDC7 sequence expressed in fusionprotein

<sup>1</sup>NCBI/Protein accession number NP\_003494.1

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