

ProQinase™ WEE1

WEE1 G2 checkpoint kinase

Recombinant Human Active Protein Kinase

HGNC Symbol: WEE1

Synonyms: WEE1A, WEE1hu

Product No.: 0136-0000-1

Lot: 005

Description: Human WEE1, C-terminal fragment, amino acids Q₃₆-Y₄₃₂ (as in [NCBI/Protein](#) entry NP_001137448.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: WEE1 Lot 005 was confirmed as WEE1 by specific Western Blotting

Theoretical MW_{Fusion Protein}: 74,902 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM TRIS-HCl pH 8.0, 100 mM NaCl, 5 mM DTT, 4 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: 0.142 µg/µl

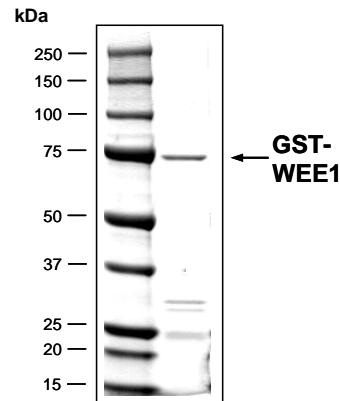
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

Specific kinase activity (P_i transfer): 2 pmol/µg × min

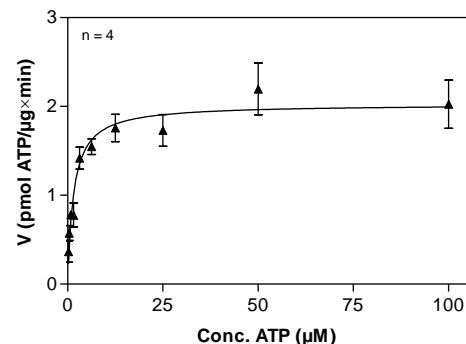
ATP-K_M: 1.6 µM

**WEE1 Lot 005:
Coomassie stain**



2.0 µg GST-WEE1

**WEE1 Lot 005:
Determination of V_{max} and K_M value for ATP**



- Assay conditions:
60 mM HEPES-NaOH, pH 7.5
3 mM MgCl₂
3 mM MnCl₂
3 µM Na-orthovanadate
1.2 mM DTT
50 µg/ml PEG_{20,000}
ATP (variable)
Substrate: Poly(Ala,Glu,Lys,Tyr)_{6:2:5:1}, 20 µg/ml
Kinase: 4 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

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GST-WEE1 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GICSIEEFQC	RRRKRTYWND	SCGEDMEASD	YELEDETRPA	KRITITESNM	300
301	KSRYTTEFHE	LEKIGSGEFG	SVFKCVKRLD	GCIYAIKRSK	KPLAGSVDEQ	NALREYVAHA	360
361	VLQGHSHVVR	YFSAWAEDDH	MLIQNEYCNG	GSLADAISEN	YRIMSYFKEA	ELKDLLLQVG	420
421	RGLRYIHSMS	LVHMDIKPSN	IFISRTSIPN	AASEEGDEDD	WASNKVMFKI	GDLGHVTRIS	480
481	SPQVEEGDSR	FLANEVLQEN	YTHLPKADIF	ALALTVVCAA	GAEPLPRNGD	QWHEIRQGRL	540
541	PRIPQVLSQE	FTELLKVMIH	PDPERRPSAM	ALVKHSVLLS	ASRKSAEQLR	IELNAEKFKN	600
601	SLLQKELKKA	QMAKAAAEER	ALFTDRMATR	STTQSNRTSR	LIGKKNRSV	SLTIY	660

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: WEE1 fragment

WEE1 wt ¹ Amino Acid Sequence							
1	MDTEKSGKRE	FDVRQTPQVN	INPFTPDSLL	LHSSGQCRRR	KRTYWNSCG	EDMEADYEL	60
61	EDETRPAKRI	TITESNMKSR	YTTEFHELEK	IGSGEFGSVF	KCVKRLDGC	YAIKRSKKPL	120
121	AGSVDEQNAL	REYAHAVLG	QHSHVRYFS	AWAEDDHMLI	QNEYCNGGSL	ADAISENYRI	180
181	MSYFKEAELK	DLLLQVGRGL	RYIHMSLVH	MDIKPSNIFI	SRTSIPNAAS	EEGEDDWAS	240
241	NKVMFKIGDL	GHVTRISSPQ	VEEGDSRFLA	NEVLQENYTH	LPKADIFALA	LTVVCAAGAE	300
301	PLPRNGDQWH	EIRQGRLPRI	PQVLSQEFTE	LLKVMIHDPD	ERRPSAMALV	KHSVLLSASR	360
361	KSAEQLRIEL	NAEKFKNSLL	QKELKKAQMA	KAAAEERALE	TDRMATRSTT	QSNRTSRLIG	420
421	KKMNRVSLT	IY					480

blue: WEE1 sequence expressed in recombinant protein

¹[NCBI/Protein](https://www.ncbi.nlm.nih.gov/protein/NP_001137448.1) accession number NP_001137448.1