

WNK1

WNK lysine deficient protein kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: WNK1

Synonyms: HSN2, HSN2, hWNK1, KDP, p65, PRKWNK1, PSK

Product No.: 1111-0000-1

Lot: 001

Description: Human WNK1, internal fragment, amino acids L₁₇₁-E₅₂₉ (as in [NCBI/Protein](#) entry NP_061852.3), N-terminal 4xFLAG, C-terminal HIS₈ fusion protein, expressed in Sf9 insect cells

Product identity: WNK1 Lot 001, was confirmed as WNK1 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 47,013 Da

Expression host: Sf9 insect cells

Purification: Immobilized Metal 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, 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: 0.417 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

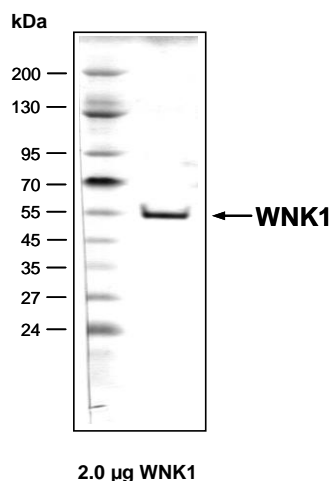
Biochemical Parameters:

Specific kinase activity (P_i transfer): 499 pmol/µg × min
ATP-K_M: 89 µM

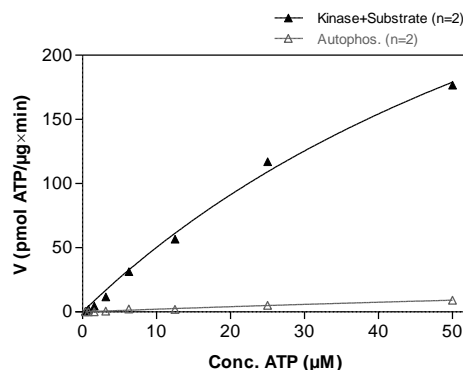
Additional assay technology:

WNK1 Lot 001 was also successfully tested by ProQinase for the use with the ADP-Glo™ Kinase assay from Promega
ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

WNK1 Lot 001: Coomassie stain



WNK1 Lot 001: Determination of V_{max} and K_M value for ATP



Determination of K_M value & Specific activity:

- 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: Bio-RS-Peptide 80 µg/ml
 - Kinase: 1 µg/ml
- Filter binding assay
MSPH membrane (Millipore)

WNK1

Product No.: 1111-0000-1

HIS-WNK1 Recombinant Fusion Protein Amino Acid Sequence							
1	MDYKDDDDDKD	YKDDDDDKDYK	DDDDDKDYKDD	DDK SGGGS LV	GSKEEPPPAR	SGSGGSSAKE	60
61	PQEERSQQQD	DIEELETKAV	GMSNDGRFLK	FDIEIGRGSF	KTVYKGLDTE	TTVEVAVCEL	120
121	QDRKLTKSER	QRFKEEAEML	KGLQHPNIVR	FYDSWESTVK	GKKCIVLVTE	LMTSGTLKTY	180
181	LKRKFVKMIK	VLRSWCRQIL	KGLQFLHTRT	PPIIHRDLKC	DNIFITGPTG	SVKIGDLGLA	240
241	TLKRASFAKS	VIGTPEFMAP	EMYEKYDES	VDVYAFGMCM	LEMATSEYPY	SECQNAAIY	300
301	RRVTSGVKPA	SFDKVAIPEV	KEIEGCIRQ	NKDERYSIKD	LLNHAFFQEE	TGVRVELAE	360
361	DDGEKIAIKL	WLRIEDIKKL	KGKYKDNEAI	EFSFDLE KKL	EHHHHHHH		420

Pink: 4xFLAG-tag **blue:** WNK1 fragment **Red:** HIS8-tag

WNK1 wt ¹ Amino Acid Sequence							
1	MSGGAAEKQS	STPGSLFLSP	PAPAPKNGSS	SDSSVGEKLG	AAAADAVTGR	TEEYRRRRHT	60
61	MDKDSRGAAA	TTTTTEHRFF	RRSVICDSNA	TALELPLGLPL	SLPQPSIPAA	VPQSAPPEPH	120
121	REETVTATAT	SQVAQQPPAA	AAPGEQAVAG	PAPSTVPSST	SKDRPVSQPS	LVGSKEEPPP	180
181	ARSGGGGSA	KEPQEERSQQ	QDDIEELETK	AVGMSNDGRF	LKFDIEIGRG	SFKTVYKGLD	240
241	TETTVEVAVC	ELQDRKLTBS	ERQRFKEEAE	MLKGLQHPNI	VRFYDSWEST	VKGKKCIVLV	300
301	TELMTSGTLK	TYLKRKFVKM	IKVLRSWCRQ	ILKGLQFLHT	RTPPIIHRDL	KCDNIFITGP	360
361	TGSVKIGDLG	LATLKRASFA	KSVIGTPEFM	APEMYEEKYD	ESVDVYAFGM	CMLEMATSEY	420
421	PYSECQNAAQ	IYRRVTSGVK	PASFDKVAIP	EVKEIEGCI	RQNKDERYSI	KDLLNHAFFQ	480
481	EETGVRVELA	EEDDGEKIAI	KLWLRIEDIK	KLKGKYKDNE	AIEFSFDLER	DVPEDVAQEM	540
541	VESGYVCEGD	HKTMAKAIKD	RVSLIKRRE	QRQLVREEQE	KKKQEESLK	QQVEQSSASQ	600
601	TGIKQLPSAS	TGIPTASTTS	ASVSTQVEPE	EPEADQHQQ	QYQQPSISVL	SDGTVDSSGQ	660
661	SSVFTESRVS	SQQTVSYGSQ	HEQAHSTGT	PGHIPSTVQA	QSQPHGVYPP	SSVAQGSQ	720
721	QPSSSLLTGV	SSSQPIQHPQ	QQQGIQQTAP	PQQTQVYSL	QTSTSSEAT	AQPVSQPAP	780
781	QVLPQVSAGK	QLPVSQPVPT	IQGEQPIVA	TQPSVVPVHS	GAHFLPVGQP	LPTPLLPQYP	840
841	VSQIPISTPH	VSTAQTGFSS	LPITMAAGIT	QPLTLASSA	TTAAIPGVST	VVPSQLPTLL	900
901	QPVTQLPSQV	HPQLLQPAVQ	SMGIPANLQ	AAEVPLSSGD	VLYQGFPPRL	PPQYPGDSNI	960
961	APSSNVASVC	IHSTVLSPPM	PTEVLATPGY	FPTVVQPYVE	SNLLVPMGGV	GGQVQVSQPG	1020
1021	GSLAQAPTTS	SQQAVLESTQ	GVSQVAPAE	VAVAQTQATQ	PTTLASSVDS	AHSDVASGMS	1080
1081	DGNENVPSSS	GRHEGRTTKR	HYRKSVRSR	RHEKTSRPKL	RILNVSNGD	RVVECQLETH	1140
1141	NRKMVTFKFD	LDGDNPEDIA	TIMVNNDFIL	AIERESFVDQ	VREIEKAE	MLSEDVSVPE	1200
1201	EGDQGLSLE	GKDDYGFSGS	QKLEGEFKQP	IPASSMPQQI	GIPTSSLTQV	VHSAGRRFIV	1260
1261	SPVPESRLRE	SKVFPSEITD	TVAASTAQP	GMNLSHSASS	LSLQAFSEL	RAAQMTEGPN	1320
1321	TAPPNFSHTG	PTFPVVPFPL	SSIAGVPTTA	AATAPVPATS	SPPNDISTSV	IQSEVTVPTE	1380
1381	EGIAGVATST	GVVTSGGLPI	PPVSESPVLS	SVVSSITIPA	VVSISTTSPS	LQVPTSTSEI	1440
1441	VVSSTALYPS	VTVSATSASA	GGSTATPGPK	PPAVVSQQA	GSTTVGATLT	SVSTTTSFPS	1500
1501	TASQLCIQLS	SSTSTPTLAE	TVVVSASHLD	KTSHSSTTGL	AFSLSAPSSS	SSPGAGVSSY	1560
1561	ISQPGLHPL	VIPSVIASTP	ILPQAAGPTS	TPLLPQVPSI	PPLVQPVANV	PAVQQTLIHS	1620
1621	QPQALLPNP	PHTHCPEVDS	DTQPKAPGID	DIKTLEELR	SLFSEHSSSG	AQHASVSLET	1680
1681	SLVIESTVTP	GIPTTAVAPS	KLLTSTTSTC	LPPTNLPLGT	VALPVTVPVT	PGQVSTPVST	1740
1741	TTSGVKPGTA	PSKPPLTKAP	VLPVGTLEPA	GTLPSEQLPP	FPGPSLTQSQ	QPLEDLDAQ	1800
1801	RRTLSPEMIT	VTSAVGPVSM	AAPTAITEAG	TQPQKGVSV	KEGPVLATSS	GAGVFKMGRF	1860
1861	QVSVAADGAQ	KEGKNKSEDA	KSVHFESSTS	ESSVLSSSSP	ESTLVKPEPN	GITIPGISSD	1920
1921	VPESAHKTTA	SEAKSDTGQP	TKVGRFQVTT	TANKVGRFSV	SKTEDKITDT	KKEGPVASPP	1980
1981	FMDLEQAVLP	AVIPKKEKPE	LSEPSHLNGP	SSDEAAFLS	RDVDDGSGSP	HSPHQLSSKS	2040
2041	LPSQNLSSQL	SNFSNYSMS	SDNESDIEDE	DLKLELRLR	DKHLKEIQDL	QSRQKHEIES	2100
2101	LYTKLGKVP	AVIIPPAAPL	SGRRRRPTKS	KGSKSSRSS	LGNKSPQLSG	NLSGQSAASV	2160
2161	LHPQQLHPP	GNIPESGQNP	LLQPLKPSPS	SDNLYSAFTS	DGAISVPSLS	APGQGTSSTN	2220
2221	TVGATVNSQA	AQAQPPAMTS	SRKGTFTDDL	HKLVDNWARD	AMNLSGRRGS	KGHMNYEGPG	2280
2281	MARKFSAPGQ	LCISMTSNLG	GSAPISAASA	TSLGHFTKSM	CPPQYGFPA	TPFGAQWSGT	2340
2341	GGPAPQPLGQ	FQPVGTASLQ	NFNISNLQKS	ISNPPGSNLR	TT		2400

blue: WNK1 sequence expressed in recombinant protein

¹[NCBI/Protein](https://www.ncbi.nlm.nih.gov/Protein) accession number NP_061852.3

This product was manufactured at ProQinase in Freiburg, Germany, and is for in vitro research use only, not for use in humans or animals. ProQinase disclaims any warranty explicitly or implied that the use of the product or parts of the product is free from third party intellectual property claims unless this is explicitly stated.