

ProQinase™ VRK2

VRK serine/threonine kinase 2

Recombinant Human Active Protein Kinase

HGNC Symbol: VRK2

Synonyms: n.a.

Product No.: 1520-0000-1

Lot: 003

Description: Human VRK2, N-internal fragment, amino acids M₁-T₄₈₃ (as in [NCBI/Protein](#) entry NP_006287.2), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: VRK2 Lot 003, was confirmed as VRK2 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 83,227 Da

Expression host: Sf9 insect 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

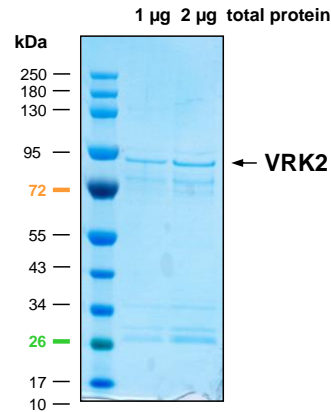
For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.168 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

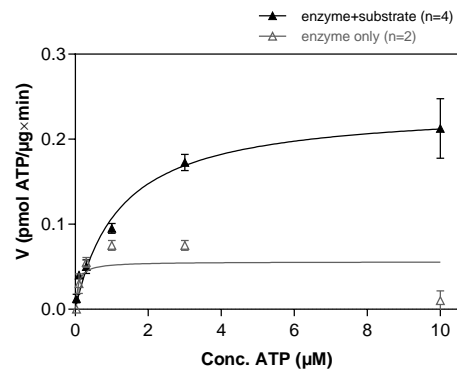
Biochemical Parameters:

Specific kinase activity (P_i transfer): 0.24 pmol/µg x min
ATP-K_M: 1.2 µM

VRK2 Lot 003:
Coomassie stain



VRK2 Lot 003:
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: Casein 20 µg/ml
 - Kinase: 2 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

Recombinant Proteins

Sequence information

GST-VRK2 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCCL	DAFPKLVCFK	180
181	KRIEAIPIQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHGG	RDSLEVLFGG	240
241	MPPKRNEKY	KLPIPFPEGK	VLDDMEGNQW	VLGKKIGSGG	FGLIYLAFPT	NKPEKDARHV	300
301	VKVEYQENGP	LFSELKQYQR	VAKKDCIKKW	IERKQLDYL	IPLFYGSGLT	EFGKRSYRFM	360
361	VMERLGIDLQ	KISGQNGTFK	KSTVLQLGIR	MLDVLEYIHE	NEYVHGDIKA	ANLLLGYKNP	420
421	DQVYLADYGL	SYRYCPNGNH	KQYQENPRKG	HNGTIEFTSL	DAHKGVALSR	RSDVEILGYC	480
481	MLRWLCGKLP	WEQNLKDPVA	VQTAKTNLLD	ELPQSVLQWA	PSGSSCCEIA	QFLVCAHSLA	540
541	YDEKPNYQAL	KKILNPHGIP	LGPLDFSTKG	QSINVHTPNS	QKVDSQKAAT	KQVNKAHNRL	600
601	IEKKVHSERS	AESCATWKVQ	KEEKLIGLMN	NEAAQESTRR	RQKYQESQEP	LNEVNSFPQK	660
661	ISYTQFPNSF	YEPHQDFTSP	DIFKKSRSPS	WYKYTSTVST	GITDLESSTG	LWPTISQFTL	720
721	SEET						780

1-218: GST **Red**: HIS6-tag **Green**: 3C cleavage site **blue**: VRK2 fragment

VRK2 wt ¹ Amino Acid Sequence							
1	MPPKRNEKYK	LPIPFPEGKV	LDDMEGNQWV	LGKKIGSGGF	GLIYLAFPTN	KPEKDARHVV	60
61	KVEYQENGPL	FSELKQYQRV	AKKDCIKKWI	ERKQLDYLGI	PLFYGSGLTE	FKGRSYRFMV	120
121	MERLGIDLQK	ISGQNGTFKK	STVLQLGIRM	LDVLEYIHEN	EYVHGDIKAA	NLLLGYKNPD	180
181	QVYLADYGLS	YRYCPNGNHK	QYQENPRKGH	NGTIEFTSLD	AHKGVALSRR	SDVEILGYCM	240
241	LRWLCGKLPW	EQNLKDPVAV	QTAKTNLLDE	LPQSVLKWAP	SGSSCCEIAQ	FLVCAHSLAY	300
301	DEKPNYQALK	KILNPHGIPL	GPLDFSTKGQ	SINVHTPNSQ	KVDSQKAATK	QVNKAHNRLI	360
361	EKKVHSERSA	ESCATWKVQK	EEKLIGLMNN	EAAQESTRRR	QKYQESQEPL	NEVNSFPQKI	420
421	SYTQFPNSFY	EPHQDFTSPD	IFKKSRSPSW	YKYTSTVSTG	ITDLESSTGL	WPTISQFTLS	480
481	EETNADVYYY	RIIPVLLML	VFLALFFL				540

blue: VRK2 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_006287.2