

ProQinase™ JAK1 aa850-1154 wt

Janus kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: JAK1

Synonyms: JAK-1; JAK1A; AK1B

Product No.: 0773-0000-1

Lot: 005

Description: Human JAK1, C-terminal fragment, amino acids E₈₅₀-K₁₁₅₄ (as in [NCBI/Protein](#) entry NP_002218.2), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: JAK1 aa850-1154 wt Lot 005, was confirmed as JAK1 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 63,467 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: 0.222 µg/µl

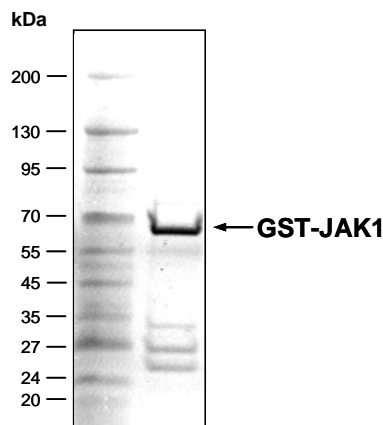
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

Specific kinase activity (P_i transfer): 12 pmol/µg × min

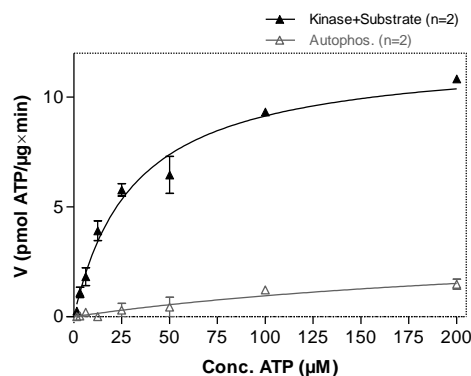
ATP-K_M: 31 µM

JAK1 aa850-1154 wt Lot 005: Coomassie stain



2.0 µg GST-JAK1

JAK1 aa850-1154 wt 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: IRStide(Y608), 40 µg/ml
Kinase: 2 µg/ml
- Filter binding assay
MSPH membrane (Millipore)

Additional assay technology:

JAK1 aa850-1154 wt Lot 005 was also successfully tested by Reaction Biology 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

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GST- JAK1 aa850-1154 wt 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	KRIEAIPIQID	KYLKSSKYIA	WPLQGWAQTF	GGGDHPPKSD	PMGHHHHHG	RDSLEVLFGQ	240
241	PLAMLEQNP	IVSEKKPATE	VDPTHFEKRF	LKRIRDLGEG	HFGKVELCRY	DPEGDNTGEQ	300
301	VAVKSLKPES	GGNHIADLKK	EIEILRNLYH	ENIVKYKGC	TEDGGNGIKL	IMEFLPSGSL	360
361	KEYLPKNKNK	INLKQQLKYA	VQICKGMDYL	GSRQYVHRDL	AARNVLVESE	HQVKIGDFGL	420
421	TKAIETDKEY	YTVKDDRDSP	VFWYAPECLM	QSKFYIASDV	WSFGVTLHEL	LTYCSDSSSP	480
481	MALFLKMIGP	THGQMTVTRL	VNTLKEGKRL	PCPPNCPDEV	YQLMRKCWEF	QPSNRTSFQN	540
541	LIEGFEALLK						600

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: JAK1 fragment

JAK1 wt ¹ Amino Acid Sequence							
1	MQYLNKEDC	NAMAFCAKMR	SSKKTEVNLE	APEPGVEVIF	YLSDREPLRL	GSGEYTAEEL	60
61	CIRAAQACRI	SPLCHNLFAL	YDENTKLWYA	PNRTITVDDK	MSLRLHYRMR	FYFTNWHGTN	120
121	DNEQSVWRHS	PKKQKNGYEK	KKIPDATPLL	DASSLEYLFA	QGQYDLVKCL	APIRDPKTEQ	180
181	DGHDIENECL	GMAVLAI SHY	AMMKMQLPE	LPKDISYKRY	IPETLNKISR	QRNLLTRMRI	240
241	NNVFKDFLKE	FNNKTICDSS	VSTHDLKVYK	LATLETLT KH	YGAEIFETSM	LLISSENNEM	300
301	WFHSNDGGNV	LYEVMVTGN	LGIQWRHKPN	VVSVEKEKNK	LKRKKLENKH	KKDEEKNKIR	360
361	EEWNNFSYFP	EITHIVIKES	VVSINKQDNK	KMELKLSSHE	EALS FVSLVD	GYFRLTADAH	420
421	HYLCTDVAPP	LIVHNIQNGC	HGPICTEYAI	NKLRQEGSEE	GMVVLRSCT	DFDNILMTVT	480
481	CFEKSEQVQG	AQKQFKNFQI	EVQKGRYS LH	GSDRSFPSLG	DLMSHLKKQI	LRTDNISFML	540
541	KRCCQPKPRE	ISNLLVATKK	AQEWQPVYPM	SQLSFDRI LK	KDLVQGEHLG	RGTRTHI YSG	600
600	TLMDYKDDDEG	TSEEKKIKVI	LKVLDP SHRD	ISLAFFEAAS	MMRQVSHKHI	VYLYGVCVRD	660
661	VENIMVEEFV	EGGPLDLFMH	RKSDVLTTPW	KFKVAKQLAS	ALSYLEDKDL	VHGNVCTKNL	720
721	LLAREGIDSE	CGPFIKLSDP	GIPITVLSRQ	ECIERIPWIA	PECVEDSKNL	SVAADKWSFG	780
781	TTLWEICYNG	EIPLKDKT LI	EKERFYESRC	RPVTPSCKEL	ADLMTRCMNY	DPNQRPF FRA	840
841	IMRDINKLEE	QNPDI VSEKK	PATEVDPTHF	EKRFLKRIRD	LGEHFGKVE	LCRYDPEGDN	900
901	TGEQVAVKSL	KPESGGNHIA	DLKKEIEILR	NLYHENIVKY	KGICTEDGGN	GIKLIMEFLP	960
961	SGSLKEYLPK	NKNKINLKQQ	LKYAVQICKG	MDYLGSRQYV	HRDLAARNVL	VESEHQVKIG	1020
1021	DFGLTKAIET	DKEYYTVKDD	RDSPVFWYAP	ECLMQSKFYI	ASDVWSFGVT	LHELLTYCDS	1080
1081	DSSPMALFLK	MIGPTHGQMT	VTRLVNTLKE	GKRLPCPPNC	PDEVYQLMRK	CWEFQPSNRT	1140
1141	SFQNLIEGFE	ALLK					1200

blue: JAK1 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_002218.2