

## JAK3

Janus kinase 3

Recombinant Human Active Protein Kinase

HGNC Symbol: JAK3

Synonyms: JAKL; L-JAK; LJAK

Product No.: 0354-0000-1

Lot: 002

**Description:** Human JAK3, C-terminal fragment, amino acids I<sub>781</sub>-S<sub>1124</sub> (as in [NCBI/Protein](#) entry NP\_000206.1), N-terminal GST-HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** JAK3, Lot 002, was confirmed as JAK3 by specific Western Blotting using anti JAK3 antibody

**Theoretical MW<sub>Fusion Protein</sub>:** 68,379 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

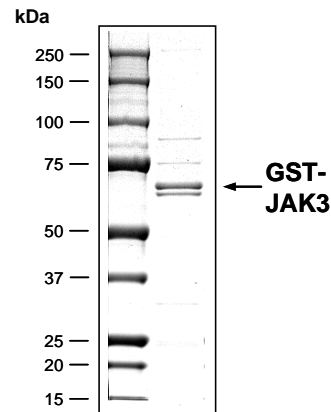
For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

**Protein concentration:** 0.213 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

### Biochemical Parameters:

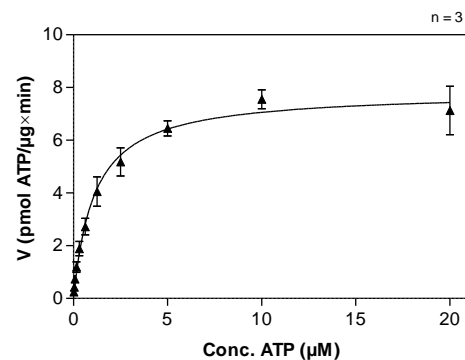
Specific kinase activity (P<sub>i</sub> transfer): 7.8 pmol/µg × min  
ATP-K<sub>M</sub>: 1.1 µM

### JAK3 Lot 002: Coomassie stain



Lot: 002, 2.0 µg

### JAK3 Lot 002: Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



### Determination of K<sub>M</sub> value & Specific activity:

- Assay conditions:
  - 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>
  - ATP (variable)
  - Substrate: TRK-C derived peptide, 50 µg/ml
  - Kinase: 4 µg/ml
- Filter binding assay
  - MSPH membrane (Millipore)

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.

# JAK3

Product No.: 0354-0000-1

GST-JAK3 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMG <b>HHHHHG</b>	RRRASVAAGI	240
241	<b>LVPRG</b> SPGLD	GICSRNSISS	<b>DYELLS</b> DPTP	<b>GALAPR</b> DGLW	<b>NGAQLY</b> ACQD	<b>PTIFEER</b> HLK	300
301	<b>YISQLG</b> KGNF	<b>GSVELC</b> RYDP	<b>LDNTG</b> ALVA	<b>VKQLQ</b> HSGPD	<b>QQRDF</b> QREIQ	<b>ILKALH</b> SDFI	360
361	<b>VKYRGV</b> SYGP	<b>GRPELR</b> L VME	<b>YLP</b> SGCLRDF	<b>LQRHR</b> ARLDA	<b>SRL</b> LLYSSQI	<b>CKGMEY</b> L GSR	420
421	<b>RCVHR</b> DLAAR	<b>NILVE</b> SEAHV	<b>KIADF</b> GLAKL	<b>LPLDK</b> DYYVV	<b>REPGQ</b> SPIFW	<b>YAPES</b> LSDNI	480
481	<b>FSRQ</b> SDVWSF	<b>GVVLY</b> ELEFTY	<b>CDKSC</b> SPSAE	<b>FLRMM</b> GCERD	<b>VPALC</b> RLELEL	<b>LEEGQ</b> RLPAP	540
541	<b>PACPA</b> EVHEL	<b>MKLCW</b> ASPQ	<b>DRPSF</b> SALGP	<b>QLDML</b> WSGSR	<b>GCETHA</b> FTAH	<b>PEGKH</b> HSLSF	600
601	S						660

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: JAK3 fragment **boxed**: variation from RefSeq

JAK3 wt <sup>1</sup> Amino Acid Sequence							
1	MAPPSEETPL	IPQRSCSLLS	TEAGALHVLL	PARAPGPPQR	LSFSFGDHLA	EDLCVQAAKA	60
61	SGILPVYHSL	FALATEDLSC	WFPPSHIFSV	EDASTQVLLY	RIRFYFPNWF	GLEKCHRFGL	120
121	RKDLASAILD	LPVLEHLFAQ	HRSDLVSGRL	PVGLSLKEQG	ECLSLAVLDL	ARMAREQAQR	180
181	PGELLKTVSY	KACLPPSLRD	LIQGLSFVTR	RAIRRTVRRR	LPRVAACQAD	RHSLMAKYIM	240
241	DLERLDPAGA	AETFHVGLPG	ALGGHDGLGL	LRVAGDGGIA	WTQGEQEV LQ	PFCDFPEIVD	300
301	ISIKQAPRVG	PAGEHRLVTV	TRTDNQILEA	EFPGLPEALS	FVALVDGYFR	LTTDSQHFFC	360
361	KEVAPPRLLE	EVAEQCHGPI	TLDFAINKLK	TGGSRPGSYV	LRRSPQDFDS	FLLTVCVQNP	420
421	LGPDYKGLCI	RRSPTGTFL	VGLSRPHSSL	RELLATCWDG	GLHVDGVAVT	LTSCCIPRPK	480
481	EKSNLIVVQR	GHSPTTSSLV	QPQSQYQLSQ	MTFHKIPADS	LEWHENLGHG	SFTKIYRGCR	540
541	HEVVDGEARK	TEVLLKVM DA	KHKNCMESFL	EAASLMSQVS	YRHLVLLHGV	CMAGDSTMVQ	600
601	EFVHLGAIMD	YLRKRGH LVP	ASWKLQVVKQ	LAYALNYLED	KGLPHGNVSA	RKVLLAREGA	660
661	DGSPFFIKLS	DPGVSPAVLS	LEMLTDRI PW	VAPECLREAQ	TLSLEADKWG	FGATVWEVFS	720
721	GVTMPISALD	PAKKLQFYED	RQQLPAPKWT	ELALLIQQCM	AYEPVQRPSF	RAVIRDLNSL	780
781	<b>ISSDYEL</b> SD	<b>PTPGAL</b> PRD	<b>GLWNGA</b> QLYA	<b>CQDPTI</b> FEER	<b>HLKYIS</b> QLGK	<b>GNFGS</b> VELCR	840
841	<b>YDPLA</b> HNTGA	<b>LVAVK</b> QLQHS	<b>GPDQ</b> QDFQR	<b>EIQIL</b> KALHS	<b>DFIVK</b> YRGVS	<b>YGPR</b> PELRL	900
901	<b>VMEYL</b> PSGCL	<b>RDFL</b> QRHRAR	<b>LDASR</b> LLLYS	<b>SQICK</b> GMEYL	<b>GSRRC</b> VHRDL	<b>AARNIL</b> VESE	960
961	<b>AHVKI</b> ADFGL	<b>AKLL</b> PLDKDY	<b>YVVRE</b> PGQSP	<b>IFWY</b> APESLS	<b>DNIF</b> SRQSDV	<b>WSFG</b> VVLYEL	1020
1021	<b>FTYCD</b> KSCSP	<b>SAEFL</b> RMMGC	<b>ERDVP</b> ALCRL	<b>LELLE</b> EQRL	<b>PAPPAC</b> PAEV	<b>HELMK</b> LCWAP	1080
1081	<b>SPQDR</b> PSFSA	<b>LGPQ</b> LDMLWS	<b>GSRGC</b> ETHAF	<b>TAHPE</b> GKHS	<b>LSFS</b>		1140

**blue**: JAK3 sequence expressed in recombinant protein **Red**: variant in recombinant protein

<sup>1</sup>[NCBI/Protein](#) accession number NP\_000206.1

A845G: congruent with reference sequence version NP\_000206.2

H846D: congruent with reference sequence version NP\_000206.2 and SNP variation see [NCBI/dbSNP](#) ID: rs1052526

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.