

ProQinase™ IGF1-R

insulin-like growth factor 1 receptor

Recombinant Human Active Protein Kinase

HGNC Symbol: IGF1R

Synonyms: CD221, IGFIR, IGFR, JTK13

Product No.: 0179-0000-1

Lot: 012

Description: Human IGF1-R C-terminal fragment, amino acids M₉₅₄-C₁₃₆₇ (as in [NCBI/Protein](#) entry NP_000866.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: IGF1-R Lot 012, was confirmed as IGF1-R by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 76,532 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!

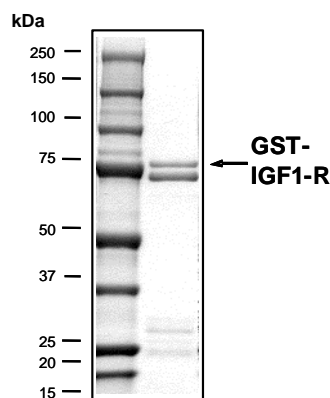
Protein concentration: 0.183 µg/µl

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

Biochemical Parameters:

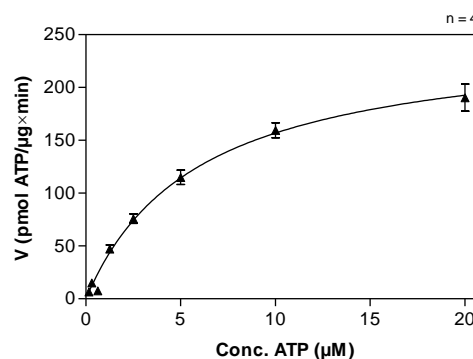
Specific kinase activity (P_i transfer): 250 pmol/µg × min
ATP-K_M: 5.9 µM

IGF1-R Lot 012: Coomassie stain



2.0 µg GST-IGF1-R

IGF1-R Lot 012: 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: Poly(Glu,Tyr)_{4:1} 10 µg/ml
 - Kinase: 0.8 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

Additional assay technology:

IGF1-R Lot 012 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-IGF1-R 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	PMG HHHHHG	RRRASVAAGI	240
241	LVPRG SPGLD	GIYARGIP ML	YVFHR KRNNS	RLGNGV LYAS	VNPEYF SAAD	VYVPDE WEVA	300
301	REKITMS REL	QGSFGM VYE	GVAKGV VKDE	PETRVA IKTV	NEAASMR ERI	EFLNEAS VMK	360
361	EFNCHH VVRL	LGVSQ GQPT	LVIMEL MTRG	DLKSYL RSLR	PEMENNP VLA	PPSLSKM IQM	420
421	AGEIAD GMAY	LNANKF VHRD	LAARNCM VAE	DFTVKI GDFG	MTRDIY ETDY	YRKGK GLLP	480
481	VRWMS PESLK	DGVFTT YSDV	WSFGV LWEI	ATLAEQ PYQG	LSNEQV LRV	MEGGLD KPD	540
541	NCPDML FELM	RCWQYN PKM	RPSFLE IIS	IKEEME PGFR	EVSFY YSEEN	KLPEPE LDL	600
600	EPENMS VPL	DPSASS SLP	LPDRHS GHKA	ENGP PGVLV	LRASF DERQP	YAHMNG GRKN	660
661	ERALPL QSS	TC					720

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: IGF1-R fragment

IGF1-R wt ¹ Amino Acid Sequence								
1	MKSGSGGGSP	TSLWGLLFLS	AALSLWPTSG	EICGPGIDIR	NDYQQLKRLE	NCTVIEGYLH	60	
61	ILLISKAEDY	RSYRFPKLT	ITEYLLLFV	AGLESLGLDF	PNLTVIRG	WKF LFYNYALVIF	120	
121	EMTNLKDIGL	YNLRNITRGA	IRIEKNADLC	YLSTVDWSLI	LDAVSNNY	IIV GNKPPKECGD	180	
181	LCPGTMEEK	P	MCEKTTINNE	YNYRCWTNR	CQKMCPSTCG	KRACTENNEC	CHPECLGSCS	240
241	APDNDTACVA	CRHYYYAGVC	VPACPPNTYR	FEGWRCVDRD	FCANILSAES	SDSEGFVIHD	300	
301	GECMQECP	SG FIRNGSQSMY	CIPCEGP	CPK VCEEEKTKT	IDSVTSAQML	QGCTIFKGNL	360	
361	LINIRRGNNI	ASELENFMGL	IEVVTGYVKI	RHSHALVLSL	FLKNLRLLIG	EEQLEGNYSF	420	
421	YVLDNQNLQ	LWDWDHRNLT	IKAGKMYFAF	NPKLCVSEIY	RMEEVTG	TGK RQSKGDINTR	480	
481	NNGERASCES	DVLHFTSTTT	SKNRIIIITWH	RYRPPDYRDL	ISFTVY	YKEA PFKNVTEYDG	540	
541	QDACGSNSWN	MVDVDLPPNK	DVEPGILLHG	LKPWTQYAVY	VKAVTLT	MVE NDHIRGAKSE	600	
600	ILYIRTNASV	PSIPLDVLSA	SNSSSQLIVK	WNPPSL	PNGN LSYYIVRWQR	QPQDGYLYRH	660	
661	NYCSKDKIPI	RKYADGTIDI	EEVTENPKTE	VCGGEK	GPCC ACPKTEAEKQ	AEKEEAEYRK	720	
721	VFENFLHNSI	FVPRPERKRR	DVMQVANTTM	SSRSRNTTAA	DTYNITD	PEE LETEYPFES	780	
781	RVDNKERTVI	SNLRPF	TLYR IDIHSCNHEA	EKLGC	SANF VFARTMPAEG	ADDIPGPVTW	840	
841	EPRPENSIFL	KWPEPENPNG	LILMYEIKYG	SQVEDQRECV	SRQEYRKYGG	AKLNR	LNPN	900
901	YTARIQATSL	SGNGSW	TDPV FFYVQAKTGY	ENFIHLIAL	PVAVLLIVGG	LVIMLYVFHR	960	
961	KRNNSRL GNG	VLYASV NPEY	FSAADV VVPD	EWVARE KIT	MSREL GQGSF	GMVYEG VAKG	1020	
1021	VVKDEP ETRV	AIKTV NEAAS	MRERIE FLNE	ASVMKE FNCH	HVVRLL GVVS	QGQPTL VIME	1080	
1081	LMTRGD LKSY	LRSLR PEMEN	NPVLAP PSLS	KMIQ MAGEIA	DGMAYL NANK	FVHRDL AARN	1140	
1141	CMVAED F	TVK IGDF GMTRDI	YETD YYRKG	GKLLP VRWMS	PESLKD GVFT	TYSDV WSFGV	1200	
1201	VLWEI ATLAE	QPYQ GLSNEQ	VLRFV MEGGL	LDKPD NC	PDM LFEL MRMCWQ	YNPKMR PSFL	1260	
1261	EIISSI KEEM	EPGF REVSFY	YSEEN KLPEP	EELD LEPENM	ESVPLD PSAS	SSSLP LDRH	1320	
1321	SGHKA ENPG	PGVL VLRAE	DERQ PYAHMN	GGRK NERALP	LPQ SSTC		1380	

blue: IGF1-R sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_000866.1