

## ProQinase™ INS-R

insulin receptor

Recombinant Human Active Protein Kinase

HGNC Symbol: INSR

Synonyms: CD220, HHF5, IR

Product No.: 0122-0000-1

Lot: 006

**Description:** Human INS-R, C-terminal fragment, amino acids G<sub>989</sub>-S<sub>1382</sub> (as in [NCBI/Protein](#) entry NP\_000199.2), N-terminal GST fusion protein, expressed in Sf9 insect cells

**Product identity:** INS-R, Lot 006, was confirmed as INS-R by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW**<sub>Fusion Protein</sub>: 70,392 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, 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:** 0.189 µg/µl

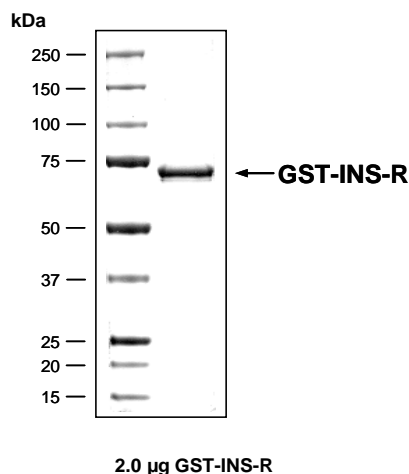
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

**Biochemical Parameters:**

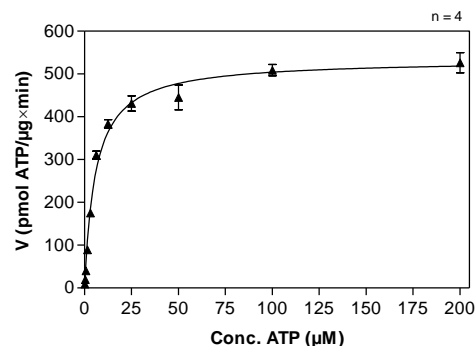
Specific kinase activity (P<sub>i</sub> transfer): 533 pmol/µg × min

ATP-K<sub>M</sub>: 5.8 µM

### INS-R Lot 006: Coomassie stain



### INS-R Lot 006: 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: Poly(Ala, Glu, Lys, Tyr)<sub>6,2,5,1</sub>; 80 µg/ml
  - Kinase: 1 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

### Additional assay technology:

INS-R Lot 006 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

## ProQinase™ INS-R

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GST-INS-R Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDKVLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PD <b>GPLYASSN</b>	<b>PEYLSASDVF</b>	240
241	<b>PCSVYVPDEW</b>	<b>EVSREKITLL</b>	<b>RELGQGSFGM</b>	<b>VYEGNARDII</b>	<b>KGEAETRVAV</b>	<b>KTVNESASLR</b>	300
301	<b>ERIEFLNEAS</b>	<b>VMKGFTCHHV</b>	<b>VRLLGVVSKG</b>	<b>QPTLVVMELM</b>	<b>AHGDLKSYLR</b>	<b>SLRPEAENNP</b>	360
361	<b>GRPPPTLQEM</b>	<b>IQMAAEIADG</b>	<b>MAYLNAKKFV</b>	<b>HRDLAARNCM</b>	<b>VAHDFTVKIG</b>	<b>DFGMTRDIYE</b>	420
421	<b>TDYYRKGKGG</b>	<b>LLPVRWMAPE</b>	<b>SLKDGVFVTT</b>	<b>SDMWSFGVVL</b>	<b>WEITSLAEQP</b>	<b>YQGLSNEQVL</b>	480
481	<b>KFVMDGGYLD</b>	<b>QPDNCPERT</b>	<b>DLMRMCWFN</b>	<b>PNMRPTFLEI</b>	<b>VNLLKDDLHP</b>	<b>SFPEVSFFHS</b>	540
541	<b>EENKAPESSE</b>	<b>LEMEFEDMEN</b>	<b>VPLDRSSHQC</b>	<b>REEAGGRDGG</b>	<b>SSLGFKRSYE</b>	<b>EHIPYTHMNG</b>	600
601	<b>GKKNGRILTL</b>	<b>PRSNPS</b>					660

1-218: GST **blue**: INS-R fragment **boxed**: variation from RefSeq

INS-R wt <sup>1</sup> Amino Acid Sequence							
1	MATGRRGAA	AAPLLVAVAA	LLLGAAGHLY	PGEVCPGMDI	RNNLTRLHEL	ENCSVIEGHL	60
61	QILLMFKTRP	EDFRDLSFPK	LIMITDYLLL	FRVYGLESJK	DLFPNLTVIR	GSRLFFNYAL	120
121	VIFEMVHLKE	LGLYNLMNIT	RGSVRIEKNN	ELCYLATIDW	SRILDSVEDN	YIVLNKDDNE	180
181	ECGDICPGTA	KGKTNCPATV	INGQFVERCW	THSHCQKVC	TICKSHGCTA	EGLCCHSECL	240
241	GNCSPDDPT	KCVACRNFYL	DGRCVETCPP	PYYHFQDWRC	VNFSFCQDLH	HKCKNSRRQG	300
301	CHQYVIHNNK	CIPECPSGYT	MNSSNLLCTP	CLGPCPKVCH	LLEGEKTIDS	V TSAQELRGC	360
361	TVINGSLIIN	IRGGNNLAAE	LEANLGLIEE	ISGYLKIRRS	YALVSLSFFR	KLRLIRGETL	420
421	EIGNYSFYAL	DNQNLRLQWD	WSKHNLITIQ	GKLFHYNPK	LCLSEIHKME	EVSQTKGRQE	480
481	RNDIALKTNG	DQASCENELL	KFSYIRTSFD	KILLRWEPY	PPDFRDLLGF	MLFYKEAPYQ	540
541	NVTEFDGQDA	CGSNSWTVVD	IDPPLRSNDP	KSQNHGWL	RGLKPWTQYA	IFVKTLLVTF	600
601	DERRTYGAKS	DIIYVQTDAT	NPSVPLDPI	VSNSSSQIIL	KWKPPSDPNG	NITHYLVFWE	660
661	RQAEDELFE	LDYCLKGLKL	PSRTWSPFFE	SEDSQKHNS	EYEDSAGECC	SCPKTDSQIL	720
721	KELEESSFRK	TFEDYLHNVV	FVPRKTSSGT	GAEDPRPSRK	RRSLGDVGNV	TVAVPTVAAF	780
781	PNTSSTSVPT	SPEHRPFK	VVNKESLVIS	GLRHFTGYRI	ELQACNQDTP	EERCSVAAYV	840
841	SARTMPEAKA	DDIVGPVTHE	IFENNVVHLM	WQEPKEPNGL	IVLYEVSYRR	YGDEELHLCV	900
901	SRKHFALERG	CRLRGLSPGN	YSVRIRATSL	AGNGSWTEPT	YFYVTDYLDV	PSNIAKIIIG	960
961	PLIFVFLFSV	VIGSIYFLR	KRQPDGPL <b>GP</b>	<b>LYASSNPEYL</b>	<b>SASDVFPCSV</b>	<b>YVPDEWEVSR</b>	1020
1021	<b>EKITLLRELG</b>	<b>QGSFGMVYEG</b>	<b>NARDIIKGEA</b>	<b>ETRVAVKTVN</b>	<b>ESASLRERIE</b>	<b>FLNEASVMKG</b>	1080
1081	<b>FTCHHVRL</b>	<b>GVVSKGQPTL</b>	<b>VVMELMAHGD</b>	<b>LKSYLRSLRP</b>	<b>EAENNPGRPP</b>	<b>PTLQEMIQMA</b>	1140
1141	<b>AEIADGMAYL</b>	<b>NAKKFVHRDL</b>	<b>AARNCMVAHD</b>	<b>FTVKIGDFGM</b>	<b>TRDIYETDYY</b>	<b>RKGGKLLPV</b>	1200
1201	<b>RWMAPESLKD</b>	<b>GVFTTSSDMW</b>	<b>SFGVVLWEIT</b>	<b>SLAEQPYQGL</b>	<b>SNEQVLKQV</b>	<b>DGGYLDQPDN</b>	1260
1261	<b>CPERTDLMR</b>	<b>MCWFN<b>KMR</b></b>	<b>PTFLEIVNLL</b>	<b>KDDLHPSFPE</b>	<b>VFFFHSEENK</b>	<b>APESSELEME</b>	1320
1321	<b>FEDMENVPLD</b>	<b>RSSHQREEA</b>	<b>GGRDGGSSLG</b>	<b>FKRSYEEHIP</b>	<b>YTHMNGGKKN</b>	<b>GRILTLPRSN</b>	1380
1381	<b>PS</b>						1440

**blue**: INS-R sequence expressed in recombinant protein **Red**: variant in recombinant protein

<sup>1</sup>[NCBI/Protein](https://www.ncbi.nlm.nih.gov/protein/NP_000199.2) accession number NP\_000199.2