

## ProQinase™ IRAK4

interleukin 1 receptor associated kinase 4

Recombinant Human Active Protein Kinase

HGNC Symbol: IRAK4

Synonyms: NY-REN-64

Product No.: 1752-0000-1

Lot: 001

**Description:** Human IRAK4, full length, amino acids M<sub>1</sub>-S<sub>460</sub> (as in [NCBI/Protein](#) entry NP\_057207.2), N-terminal GST-HIS<sub>6</sub> fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

**Product identity:** IRAK4 Lot 001, was confirmed as IRAK4 by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW<sub>Fusion Protein</sub>:** 79,619 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:** 0.393 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

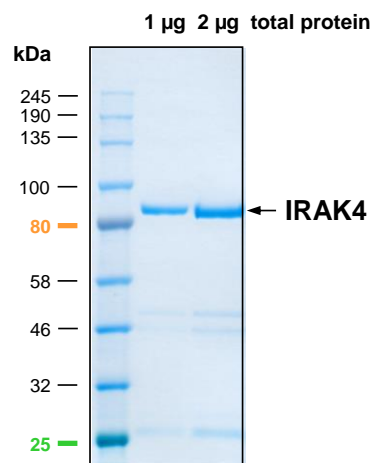
### Biochemical Parameters:

Specific kinase activity (P<sub>i</sub> transfer): 126 pmol/µg × min  
ATP-K<sub>M</sub>: 5.3 µM

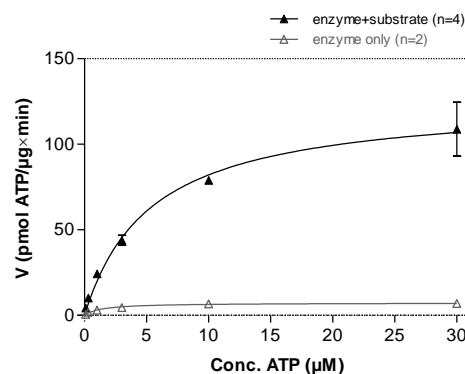
### Additional assay technology:

IRAK4 Lot 001 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

### IRAK4 Lot 001: Coomassie stain



### IRAK4 Lot 001: Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



- 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: RB-CTF 20 µg/ml
  - Kinase: 0.4 µg/ml
- Filter binding assay
  - MSFC membrane (Millipore)

## ProQinase™ IRAK4

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GST-IRAK4 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDKVLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWAQTF	GGGDHPPKSD	PMGHHHHHG	RDSLEVLFGG	240
241	MNKPITPST	YVRLNVGLI	RKLSDFIDPQ	EGWKKLAVAI	KKPSGDDRYN	QFHRRFEAL	300
301	LQTGKSPTSE	LLFDWGTTC	TVGDLVDLLI	QNEFFAPASL	LLPDAVPKTA	NTLPSKEAIT	360
361	VQQKQMPFCD	KDRTLMTFVQ	NLEQSYMPPD	SSSPENKSLE	VSDTRFHSFS	FYELKNVTNN	420
421	FDERPISVGG	NKMGEGGFV	VYKGYVNNTT	VAVKKLAAMV	DITTEELKQQ	FDQEIKVMAC	480
481	CQHENLVELL	GFSSDGDLLC	LVVYMPNGS	LLDRLSCLDG	TPPLSWHMRC	KIAQGAANGI	540
541	NFLHENHHIH	RDIKSANILL	DEAFTAKISD	FGLARASEKF	AQTVMTSRIV	GTTAYMAPEA	600
601	LRGEITPKSD	IYSFGVLLLE	IITGLPAVDE	HREPQLLLDI	KEEIEDEEKT	IEDYIDKMMN	660
661	DADSTSVEAM	YVASQCLHE	KKNKRPDIKK	VQQLQEMTA	S		720

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: IRAK4

IRAK4 wt <sup>1</sup> Amino Acid Sequence							
1	MNKPITPSTY	VRCLNVGLIR	KLSDFIDPQE	GWKKLAVAIK	KPSGDDRYNQ	FHIRRFEALL	60
61	QTGKSPTSEL	LFDWGTTNCT	VGDLVDLLIQ	NEFFAPASLL	LPDAVPKTAN	TLPSKEAITV	120
121	QQKQMPFCDK	DRTLMTFVQN	LEQSYMPPDS	SSPENKSLEV	SDTRFHSFSF	YELKNVTNNE	180
181	DERPISVGGN	KMGEGGFVV	YKGYVNNTTV	AVKKLAAMVD	ITTEELKQQF	DQEIKVMAC	240
241	QHENLVELLG	FSSDGDLLCL	VYVYMPNGSL	LDRLSCLDGT	PPLSWHMRC	IAQGAANGIN	300
301	FLHENHHIHR	DIKSANILLD	EAFTAKISDF	GLARASEKFA	QTVMTSRIVG	TTAYMAPEAL	360
361	RGEITPKSDI	YSGVLLLEI	ITGLPAVDEH	REPQLLLDIK	EEIEDEEKT	EDYIDKMMND	420
421	ADSTSVEAMY	SVASQCLHEK	KKNKRPDIKKV	VQQLQEMTAS			480

blue: IRAK4 sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](#) accession number NP\_057207.2