

IRAK4 (untagged)

interleukin-1 receptor associated kinase 4

Recombinant Human Active Protein Kinase

HGNC Symbol: IRAK4

Synonyms: REN64; NY-REN-64; IPD1

Product No.: 0586-0000-1

Lot: 006

Description: Human IRAK4, C-terminal fragment, amino acids A₁₀₄-S₄₆₀ (as in [NCBI/Protein](#) entry NP_057207.2), untagged, expressed in Sf9 insect cells

Product identity: IRAK4 Lot 006, was confirmed as IRAK4 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 40,378 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, 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: 0.119 µg/µl

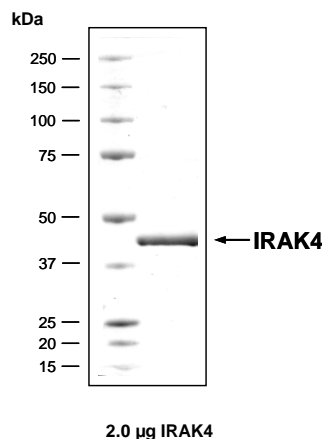
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

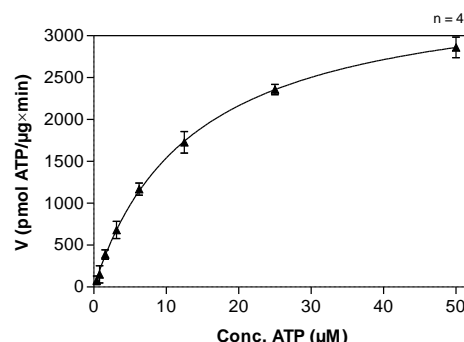
Specific kinase activity (P_i transfer): 3640 pmol/µg x min

ATP-K_M: 14 µM

IRAK4 Lot 006: Coomassie stain



IRAK4 Lot 006: 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: Histone H2B 100 µg/ml
 - Kinase: 0.4 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

Additional assay technology:

IRAK4 Lot 006 was also successfully tested by ProQinase 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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IRAK4 Recombinant Fusion Protein Amino Acid Sequence							
1	GPLAMAVPKT	ANTLPSKEAI	TVQKQMPFC	DKDRTLMTPV	QNLEQSYMPP	DSSSPENKSL	60
61	EVSDTRFHSF	SFYELKNVTN	NFDERPISVG	GKMGEGGFG	VVYKGYVNTT	TVAVKKLAAM	120
121	VDITTEELKQ	QFDQEIKVMA	KCQHENVLVEL	LGFSDDGDDL	CLVYVYMPNG	SLLDRLSCLD	180
181	GTPPLSWHMR	CKIAQGAANG	INFLHENHHI	HRDIKSANIL	LDEAFTAKIS	DFGLARASEK	240
241	FAQTVMTSRI	VGTTAYMAPE	ALRGEITPKS	DIYSFGVLL	EIITGLPAVD	EHREPQLLLD	300
301	IKEEIEDEEK	TIEDYIDKKM	NDADSTSVEA	MYSVASQCLH	EKKNKRPDIK	KVQQLQEMT	360
361	AS						420

1-5: remnant of tag cleavage **blue**: IRAK4 fragment

IRAK4 wt ¹ Amino Acid Sequence							
1	MNKPITPSTY	VRCLNVGLIR	KLSDFIDPQE	GWKKLAVAIAK	KPSGDDRYNQ	FHIRRFEALL	60
61	QTGKSPTSEL	LFDWGTNCT	VGDLVDLLIQ	NEFFAPASLL	LPDAVPKTAN	TLPSKEAITV	120
121	QKQMPFCDK	DRTLMTPVQN	LEQSYMPPDS	SSPENKSLEV	SDTRFHSFSF	YELKNVTNNE	180
181	DERPISVGGN	KMGEGGFGVV	YKGYVNTTV	AVKKLAAMVD	ITTEELKQQF	DQEIKVMAKC	240
241	QHENVLVELL	FSSDGDLDLCL	VYVYMPNGSL	LDRLSCLDGT	PPLSWHMRCK	IAQGAANGIN	300
301	FLHENHHIHR	DIKSANILLD	EAF TAKISDF	GLARASEKFA	QTVMTSRIVG	TTAYMAPEAL	360
361	RGEITPKSDI	YSFGVLLLEI	ITGLPAVDEH	REPQLLLDIK	EEIEDEEKTI	EDYIDKKMND	420
421	ADSTSVEAMY	SVASQCLHEK	KNKRPDIKVV	QQLQEMTAS			480

blue: IRAK4 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_057207.2

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