

Aurora-A

aurora kinase A

Recombinant Human Active Protein Kinase

HGNC Symbol: AURKA

Synonyms: AIK, ARK1, ARK-1, AurA, AURA, BTAK, hARK1, STK15, STK6, STK7

Product No.: 0166-0000-1

Lot: 004

Description: Human Aurora A, full length, amino acids M₁-S₄₀₃ (as in [NCBI/Protein](#) entry NP_003591.2), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: Aurora-A, Lot 004, was confirmed as Aurora-A by specific Western Blotting using anti Aurora-A antibody

Theoretical MW_{Fusion Protein}: 76,334 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, 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: 0.245 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

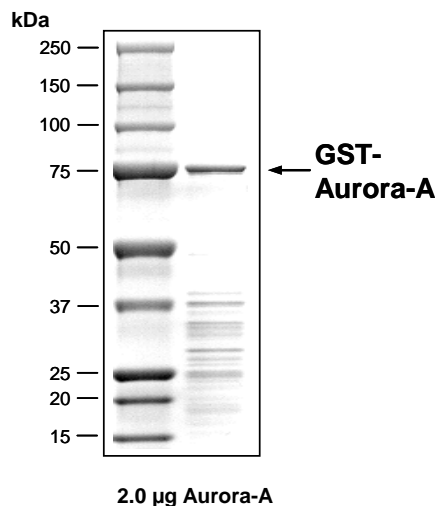
Biochemical Parameters:

Specific kinase activity (P_i transfer): 129 pmol/µg × min
ATP-K_M: 21 µM

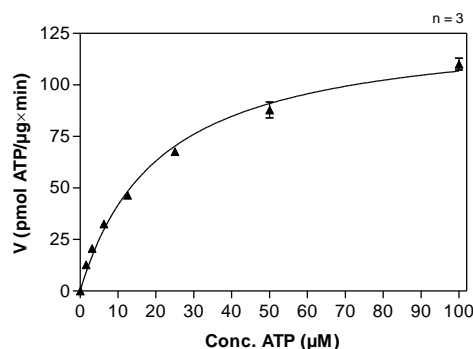
Additional assay technology:

Aurora-A Lot 004 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

Aurora-A Lot 004: Coomassie stain



Aurora-A Lot 004: 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: tetra(LRRLSLG) 100 µg/ml
 - Kinase: 4 µg/ml
- Filter binding assay
MSPH membrane (Millipore)

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GST-Aurora-A Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQG WQATF	GGGDHPPKSD	PMG HHHHHG	RRRASVAAGI	240
241	LVPRG SPGLD	GIYARGIQAS	MGARGR MDRS	KENCISGPVK	ATAPVGGPKR	VLVTQQFPCQ	300
301	NPLPVNSGQA	QRVLCPSNS	QRVPLQAQKL	VSSHKPVQNQ	KQKQLQATSV	PHPVSRPLNN	360
361	TQKSKQPLPS	APENNP E EEL	ASKQKNEESK	KRQWALED FE	IGHPLGKGF	GNVYLAREKQ	420
421	SKFILALKVL	FKAQLEKAGV	EHQLRREVEI	QSHLRHPNIL	RLYGYFHDAT	RVYLILEYAP	480
481	LGTVYRELQK	LSKFDEQRTA	TYITELANAL	SYCHSKRVIH	RDIKPENLLL	GSAGELKIAD	540
541	FGWSVHAPSS	RRTTLCG TLD	YLPPEMIEGR	MHDEKVDLWS	LGVLCEYFLV	GKPPFEANTY	600
601	QETYKRISRV	EFTFPDFVTE	GARDLISRLL	KHNPSQR PML	REVLEHPWIT	ANSSKPSNCQ	660
661	NKESASKQS						720

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

Aurora-A wt ¹ Amino Acid Sequence							
1	MDRSKENCIS	GPVKATAPVG	GPKRVLVTQQ	FPCQNPLPVN	SGQAQRVLC P	SNSSQR I PLQ	60
61	AQKLVSSHKP	VQNQKQKQLQ	ATSVPHVSR	PLNNTQKSKQ	PLPSAPENNP	EEELASKQKN	120
121	EESKKQWAL	EDFEIG R PLG	KGKFGNVYLA	REKQSKFILA	LKVLFKAQLE	KAGVEHQ LRR	180
181	EVEIQSHLRH	PNILRLYGYF	HDATRVYLIL	EYAPLGTVYR	ELQKLSKFDE	QRTATYITEL	240
241	ANALSYCHSK	RVIHRDIKPE	NLLLSGAGEL	KIADFGWSVH	APSSRRTTLC	GTLDYLPPEM	300
301	IEGRMHDEKV	DLWSLGVLCY	EFLVGKPPFE	ANTYQETYKR	ISRVEFTFPD	FVTEGARDLI	360
361	SRL LKHNP SQ	RPMLREVLEH	PWITANSSKP	SNCQNKESAS	QQS		420

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

¹NCBI/Protein accession number NP_003591.2
I57V: SNP variation see [NCBI/dbSNP](#) ID: rs1047972
R137H: SNP variation see [NCBI/dbSNP](#) ID: rs752948413

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