

SNARK

NUAK family kinase 2

Recombinant Human Active Protein Kinase

HGNC Symbol: NUAK2

Synonyms: DKFZp434J037, DKFZp686F01113, FLJ90349

Product No.: 0414-0000-1

Lot: 001

Description: Human SNARK, full length, amino acids M₁-T₆₂₈ (as in [NCBI/Protein](#) entry NP_112214.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

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

Theoretical MW_{Fusion Protein}: 99,007 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: 0.085 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

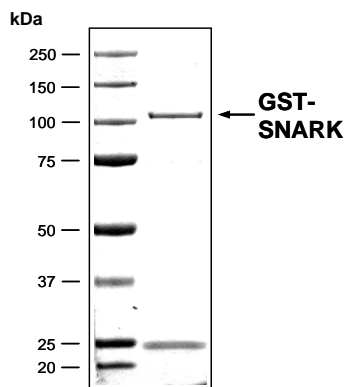
Biochemical Parameters:

Specific kinase activity (P_i transfer): 6 pmol/µg × min
ATP-K_M: 0.93 µM

Additional assay technology:

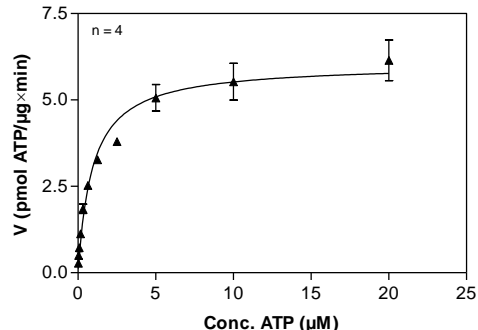
SNARK Lot 001 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

SNARK Lot 001: Coomassie stain



2.0 µg GST-SNARK

SNARK Lot 001: Determination of V_{max} and K_M value for ATP



- 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: Myelin Basic Protein 50 µg/ml
Kinase: 4 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

ProQinase™ SNARK

Product No.: 0414-0000-1

GST-SNARK 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	LVPRGSPGLD	GICSR MESLV	FARRSGPTPS	AAELARPLAE	GLIKSPKPLM	KKQAVKRHHH	300
301	KHNLRHRYEF	LETLGKGTYG	KVKKARESSG	RLVAIKSIRK	DKIKDEQDLM	HIRREIEIMS	360
361	SLNHPHIIAI	HEVFENSSKI	VIVMEYASRG	DLYDYISERQ	QLSEREARHF	FRQIVSAVHY	420
421	CHQNRVVHRD	LKLENILLDA	NGNIKIADFG	LSNLYHQGKF	LQTFCGSPLY	ASPEIVNGKP	480
481	YTGPEVDSWS	LGVLLEYLIVH	GTMPFDGDH	KILVKQISNG	AYREPPKPSD	ACGLIRWLLM	540
541	VNPTRRATLE	DVASHWVNW	GYATRVGEQE	APHEGGHPGS	DSARASMADW	LRRSSRPLE	600
601	NGAKVCSFFK	QHAPGGGTT	PGLERQHSK	KSRKENDMAQ	SLHSDTADDT	AHRPGKSNLK	660
661	LPGKILKKV	SASAEGVQED	PPELSPIPAS	PGQAAPLLPK	KGILKKPRQR	ESGYYSPEP	720
721	SESGELLDAG	DVVFSGDPKE	QKPPQASGLL	LHRKGILKLN	GKFSQTALEL	AAPTTFGSLD	780
781	ELAPPRPLAR	ASRPSGAVSE	DSILSSESEF	QLDLPERLPE	PPLRGCVSVD	NLTGLEPPS	840
841	EGPGSCLRRW	RQDPLGDSCF	SLTDCQEVTA	TYRQALRVCS	KLT		900

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: SNARK

SNARK wt ¹ Amino Acid Sequence							
1	MESLVFARRS	GPTPSAAELA	RPLAELIKS	PKPLMKQAV	KRHHHKHNL	HRYEFLETLG	60
61	KGTYGKVKKA	RESSGRLVAI	KSIRKDKIKD	EQDLMHIRRE	IEIMSSLNHP	HIIIAIHEVFE	120
121	NSSKIVIVME	YASRGDLYDY	ISERQQLSER	EARHFFRQIV	SAVHYCHQNR	VVHRDLKLEN	180
181	ILLDANGNIK	IADFGLSNLY	HQGKFLQTF	GSPLYASPEI	VNGKPYTGPE	VDSWSLGVLL	240
241	YILVHGTMPE	DGHDHKILVK	QISNGAYREP	PKPSDACGLI	RWLLMVNPT	RATLEDVASH	300
301	WVNWGYATR	VGEQEAPHEG	GHPGSDSARA	SMADWLRSS	RPLLENGAKV	CSFFKQHAPG	360
361	GGSTTPGLER	QHSLKKSKE	NDMAQSLHSD	TADDTAHRPG	KSNLKLPGI	LKKKVSASAE	420
421	GVQEDPPELS	PIPASPGQAA	PLLPKKILK	KPRQRESGYY	SSPEPSEGE	LLDAGDVFS	480
481	GDPKEQKPPQ	ASGLLLHRKG	ILKLNKFSQ	TALELAAPT	FGSLDELAPP	RPLARASRPS	540
541	GAVSEDSILS	SESFQDLDP	ERLPEPPLRG	CVSVDNLTGL	EPPSEGPS	CLRRWRQDPL	600
601	GDSCFSLTDC	QEVTTATYRQA	LRVCSKLT				660

blue: SNARK sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_112214.1