

## Active Recombinant Human NUAK2, His-tagged(Mutant K85R)

Cat. No. NUAK2-91H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	The recombinant Human NUAK2, His-tagged(Mutant K85R) protein was expressed in E. coli and purified by affinity chromatography in combination with FPLC columns.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>Description</b>	Highest expression of SNARK is found in kidney, followed in order by brain, ovary, heart, lung, skeletal muscle, pancreas, testis, and spleen. In insulin-stimulated adipocytes, SIK2 phosphorylates IRS1 at ser794 and may modulate the efficiency of insulin signal transduction, eventually causing the insulin resistance associated with diabetes. Cells with reduced expression of SNARK also showed reduced motility and invasiveness in response to CD95 engagement. SNARK therefore represents an NF-kappaB-regulated anti-apoptotic gene that contributes to the tumor-promoting activity of CD95 in apoptosis-resistant tumor cells. Glucose deprivation increased SNARK activity 3-fold in BHK fibroblasts. These findings identify SNARK as a glucose- and AICAriboside-regulated member of the AMPK-related gene family that represents a new candidate mediator of the cellular response to metabolic stress.
<b>Form</b>	The protein is in 20mM Tris-HCl pH7.9, 100mM NaCl, 0.2mM EDTA, 1mM DTT and 20% glycerol.
<b>Bio-activity</b>	1 unit equals 1 nanogram of purified protein.
<b>Molecular Mass</b>	71.8 kDa.

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**AA Sequence**

MESLVFARRS GPTPSAAELA RPLAELIKS PKPLMKKQAV KRHHHKHNL  
 HRYEFLETG KGTYGKVKKA RESSGRLVAI KSIRRDKIKD EQDLMHIRRE  
 IEIMSSLNHP HIIAIEVFE NSSKIVIVME YASRGDLYDY ISERQQLSER  
 EARHFFRQIV SAVHYCHQNR VVHRDLKEN ILLDANGNIK IADFGLSNLY  
 HQGKFLQTFC GSPLYASPEI VNGKPYTGPE VDSWSLGVLL YILVHGTMPF  
 DGHDHKILVK QISNGAYREP PKPSDACGLI RWLLMVNPTR RATLEDVASH  
 WWWNWGYATR VGEQEAPHEG GHPGSDSARA SMADWLRRSS RPLENGAKV  
 CSFFKQHAPG GGSTTPGLER QHSLKKS RKE NDMAQSLHSD TADDTAHRPG  
 KSNLKLPGKI LKKKVSASAE GVQEDPPELS PIPASPGQAA PLLPKKGILK  
 KPRQRESGYY SSPEPSESGE LLDAGDVFVS GDPKEQKPPQ ASGLLLHRKG  
 ILKLNKFSQ TALELAAPTT FGSLDELAPP RPLARASRPS GAVSEDSILS  
 SESFDQLDLP ERLPEPLRG CVSDNLTGL EPPPSEPGS CLRRWRQDPL  
 GDSCFSLTDC QEVTATYRQA LRVCSKLT

**Purity**

Greater than 90% as determined by SDS-PAGE.

**Applications**

It is capable of autophosphorylation in vitro; immunoprecipitated SNARK has been known to show phosphotransferase activity with a synthetic peptide substrate.

**Storage**

Stored at -70°C before use. Avoid repeated freeze thaw cycles.

**GENE INFORMATION**

**Gene Name**

NUAK2 NUA family, SNF1-like kinase, 2 [ Homo sapiens ]

**Official Symbol**

NUAK2

**Synonyms**

NUAK2; NUA family, SNF1-like kinase, 2; NUA family SNF1-like kinase 2;  
 FLJ90349; SNARK; SNF1/AMP activated protein kinase; omphalocele kinase 2;  
 SNF1/AMP kinase-related kinase; DKFZp434J037; DKFZp686F01113;

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<b>Gene ID</b>	81788
<b>mRNA Refseq</b>	NM_030952
<b>Protein Refseq</b>	NP_000153
<b>MIM</b>	138079
<b>UniProt ID</b>	P35557
<b>Chromosome Location</b>	7p15.3-p15.1
<b>Pathway</b>	Amino sugar and nucleotide sugar metabolism, organism-specific biosystem; Amino sugar and nucleotide sugar metabolism, conserved biosystem; Butirosin and neomycin biosynthesis, organism-specific biosystem; Butirosin and neomycin biosynthesis, conserved biosystem; Developmental Biology, organism-specific biosystem; FOXA2 and FOXA3 transcription factor networks, organism-specific biosystem; GDP-glucose biosynthesis, organism-specific biosystem;
<b>Function</b>	ATP binding; glucokinase activity; glucose binding; kinase activity; nucleotide binding; protein binding; transferase activity;

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