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Product datasheet for AR09040PU-N

Hexokinase-1 (1-917, His-tag) Human Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Hexokinase-1 (1-917, His-tag) human recombinant protein, 0.1 mg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MGSSHHHHHH SSGLVPRGSH MIAAQLLAYY FTELKDDQVK KIDKYLYAMR LSDETLIDIM TRFRKEMKNG LSRDFNPTAT VKMLPTFVRS IPDGSEKGDF IALDLGGSSF RILRVQVNHE KNQNVHMESE VYDTPENIVH GSGSQLFDHV AECLGDFMEK RKIKDKKLPV GFTFSFPCQQ SKIDEAILIT WTKRFKASGV EGADVVKLLN KAIKKRGDYD ANIVAVVNDT VGTMMTCGYD DQHCEVGLII GTGTNACYME ELRHIDLVEG DEGRMCINTE WGAFGDDGSL EDIRTEFDRE IDRGSLNPGK QLFEKMVSGM YLGELVRLIL VKMAKEGLLF EGRITPELLT RGKFNTSDVS AIEKNKEGLH NAKEILTRLG VEPSDDDCVS VQHVCTIVSF RSANLVAATL GAILNRLRDN KGTPRLRTTV GVDGSLYKTH PQYSRRFHKT LRRLVPDSDV RFLLSESGSG KGAAMVTAVA YRLAEQHRQI EETLAHFHLT KDMLLEVKKR MRAEMELGLR KQTHNNAVVK MLPSFVRRTP DGTENGDFLA LDLGGTNFRV LLVKIRSGKK RTVEMHNKIY AIPIEIMQGT GEELFDHIVS CISDFLDYMG IKGPRMPLGF TFSFPCQQTS LDAGILITWT KGFKATDCVG HDVVTLLRDA IKRREEFDLD VVAVVNDTVG TMMTCAYEEP TCEVGLIVGT GSNACYMEEM KNVEMVEGDQ GQMCINMEWG AFGDNGCLDD IRTHYDRLVD EYSLNAGKQR YEKMISGMYL GEIVRNILID FTKKGFLFRG QISETLKTRG IFETKFLSQI ESDRLALLQV RAILQQLGLN STCDDSILVK TVCGVVSRRA AQLCGAGMAA VVDKIRENRG LDRLNVTVGV DGTLYKLHPH FSRIMHQTVK ELSPKCNVSF LLSEDGSGKG AALITAVGVR LRTEASS
Tag:	His-tag
Predicted MW:	104.6 kDa
Concentration:	lot specific
Purity:	>90% by SDS PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl pH 8.0, 10% glycerol
Bioactivity:	Specific: > 2 units/ml obtained by measuring the increase of NADPH in absorbance at 340 nm resulting from the reduction of NADP. In the coupled mode, one unit will produce 1.0 umole of NADPH per minute as glucose is phosphorylated by ATP at pH 7.4 at 30°C.
Preparation:	Liquid purified protein

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Applications:	Protocol: Activity Assay 1. Prepare a 2.57ml reaction mixture into a suitable container: The final concentrations are 39 mM triethanolamine, 216 mM D-glucose, 0.74mM ATP, 7.8 mM MgCl2, 1.1 mM beta-NADP, 2.5 units G6PD. 2. Equilibrate to 25°C and monitor the A340nm until the value is constant using a spectrophotometer. 3. Add 5ug of recombinant hexokinase1 into reaction mixture and mix immediately. 4. Record the increase in A340nm for 5 minutes
Protein Description:	Recombinant human Hexokinase1, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Storage:	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	NP_000179
Locus ID:	3098
UniProt ID:	P19367, Q59FD4, B3KXY9, A8K7J7
Cytogenetics:	10q22.1
Synonyms:	hexokinase; HK; HK1-ta; HK1-tb; HK1-tc; HKD; HKI; HMSNR; HXK1; NEDVIBA; RP79
Summary:	Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes a ubiquitous form of hexokinase which localizes to the outer membrane of mitochondria. Mutations in this gene have been associated with hemolytic anemia due to hexokinase deficiency. Alternative splicing of this gene results in several transcript variants which encode different isoforms, some of which are tissue-specific. [provided by RefSeq, Apr 2016]
Protein Families:	Druggable Genome
Protein Pathways:	Amino sugar and nucleotide sugar metabolism, Fructose and mannose metabolism, Galactose metabolism, Glycolysis / Gluconeogenesis, Insulin signaling pathway, Metabolic pathways, Starch and sucrose metabolism, Type II diabetes mellitus

Product images: