www.neobiolab.com
info@neobiolab.com
888.754.5670, +1 617.500.7103 United States
0800.088.5164, +44 020.8123.1558 United Kingdom

HK1 Human

Catalog #:PKPS-233

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Description:HK1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain fused to His tag at the N-terminal encoding the sequence of 937 amino acids and having a molecular mass of 104.6 kDa.HXK1 is purified by proprietary chromatographic techniques.

Synonyms: Hexokinase-1, EC 2.7.1.1, Hexokinase type I, HK I, Brain form hexokinase, HK1-ta, HK1-tb, HXK1, HK1.

Source: Escherichia Coli.

Physical Appearance: Sterile filtered colorless solution.

Amino Acid Sequence:MGSSHHHHHH SSGLVPRGSH MIAAQLLAYY FTELKDDQVK KIDKYLYAMR LSDETLIDIMTRFRKEMKNG LSRDFNPTAT VKMLPTFVRS IPDGSEKGDF IALDLGGSSF RILRVQVNHE KNQNVHMESE VYDTPENIVH GSGSQLFDHV AECLGDFMEK RKIKDKKLPV GFTFSFPCQQSKIDEAILIT WTKRFKASGV EGADVVKLLN KAIKKRGDYD ANIVAVVNDT VGTM

Purity: Greater than 90.0% as determined by(a) Analysis by RP-HPLC.(b) Analysis by SDS-PAGE.

Formulation:
The protein (1mg/ml) contains 20mM Tris pH8.0 and 10% glycerol.

Usage:
NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drµgs, agricultural or pesticidal products, food additives or household chemicals.

Introduction:
Hexokinases phosphorylate glucose to produce glucose-6-phosphate, thus committing glucose to the glycolytic pathway. Hexokinase1 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 HXK1 results in five transcript variants which encode different isoforms, some of which are tissue-specific. Each isoform has a distinct N-terminus; the remainder of the protein is identical among all the isoforms. A sixth transcript variant has been described, but due to the presence of several stop codons, it is not thoµght to encode a protein.

Biological Activity:
Specific activity is 7-8 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.

Storage:
Store at 4°C if entire vial will be used within 2-4 weeks.Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

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