

Product Specification Sheet

Recombinant Human Hexokinase 3 (HXK-3/HK3)

□ Cat. # HXKX35-R-10 Recombinant (E.Coli) purified Human Hexokinase 3 (HXK-3/HK-3), full length **SIZE:** 10 ug

Hexokinase catalyzes the first step of several metabolic pathways by converting D-hexose to D-hexose-6-P. Hexokinase is an allosteric enzyme inhibited by its products glucose-6-phosphate. At least 4 related hexokinase isoforms (**HXKI-III; HXK-IV also known as Glucokinase**) have been cloned and characterized. Hexokinases (~100kDa for HXK1-III; HXKIV lacks the N-terminal domains and is ~50 kDa) are outer mitochondrial membrane proteins. The N-terminus, containing the mitochondrial target sequence, and the C-terminal has high sequence homology among various isoforms. The catalytic activity is associated with the C-terminus and other regulatory functions are controlled by the N-terminus. HXK3 (chromosome 5) has a more limited distribution that includes white cells and shows a genetically determined polymorphism. It is also expressed in lung and liver. It is 50% identical to HXK1.

Synonyms:

Hexokinase-3, EC 2.7.1.1, Hexokinase type III, HK III, HXK3, HK3.

Source of Antigen, and Antibodies

Recombinant Human HK3/HXK3 sequence

MGSSHHHHHH SSGLVPRGSH MDSIGSSGLR QGEETLSCSE
 EGLPGPSDSSE LVQECLQQFKVTRAQLQOI QASLLGSMEQ
 ALRGQASPAP AVRMLPTYVG STPHGTEQGD FVVLELGATG
 ASLRVLWVTL TGIEGHRVEP RSQEFVIPQE VMLGAGQQLF
 DFAAHCLSEF LDAQPVNKQGLQLGFSFSFP CHQTGLDRST
 LISWTKGFRC SGVEGQDVVQ LLRDAIRROG AYNIDVVAVV
 NDTVGTMMGC EPGVRPCEVG LVVDGTGNAC YMEEARHVAV
 LDEDRGRVCV SVEWGSFSDD GALGPVLTTF DHTLDHESLN
 PGAQRFEKMI GGLYLGEELVR LVLHLARCG VLFGGCTSPA
 LLSQGSILLE HVAEMEDPST GAARVHAILQ DLGLSPGASD
 VELVQHCAA VCTRAAQLCA AALAAVLSCL QHSREQOTLQ
 VAVATGGRVC ERHPRFCSVL QGTVMLLAPE
 CDVSLIPSDGGRGVAMVT AVAARLAAHR RLLEETLAPF
 RLNHDQLAAV QAQMRKAMAK GLRGEASSLR MLPTFVRATP
 DGSERGDFLA LDLGGTNRV LLVRVTGVQ ITSEIYSIPE
 TVAQSGGQQL FDHIVDCIVD FQQKQGLSGQ SLPLGFTFSF
 PCRQLGLDQG ILLNWTGFK ASDCEGQDVV SLLREAITRR
 QAVELNVVAI VNDTVGTMMMS CGYEDPRCEI GLIVGTGTNA
 CYMEELRNVAGVPGDSGRMC INMEWGAFGD DGSLAMLSTR
 FDASVDQASI NPGKQFEKM ISGMYLGEIV RHILLHLTSL
 GVLFRGQQIQ RLQTRDIFKT KFLSEIESDS LALRQVRAIL
 EDLGLPLTSDDALMVLEVCQ AVSQRAAQLC GAGVAAVVEK
 IRENRGLEEL AVSVGVDGTL YKLHPRFSSL VAATVRELAP
 RCVVTFQLQE DSGSGAALV TAVACRLAQL TRV

HK3 Human (923 aa; protein accession # P52790)
 Recombinant was expressed in E. coli as His-tag fusion protein and purified (95%). Purified HK3 is a single, non-glycosylated protein of ~102 kDa.

Recombinant human HK3/HXK3 protein is supplied in 20mM Tris, pH 8.0 in 10% Glycerol at 1 mg/ml (see lot specific concn on the vial). Store at -20oC for long term storage. A carrier protein (BSA or HSA) can be added at 0.1% to improve long term storage.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Recombinant human HK3 can be used as antigen for ELISA or Western.

General References: Palma F et al (1996) Mol Cell Biol. 15, 23-29; SCHWAB DA et al (1991) Arch biochem Biophys. 285, 365-370; Colosimo, A. et al (1996) Cytogenet. Cell Genet. 74: 187-188; . Furuta, H.(1996) Genomics 36: 206-209; Povey, et al (1975) Ann. Hum. Genet. 38: 407-415

*This product is for In vitro research use only.

Related material available from ADI

Antibodies HXKI-III;

HXKX35-R-10

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