

**APD352Hu01 100µg**

**Active Hexokinase 2 (HK2)**

**Organism Species: *Homo sapiens* (Human)**

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Trp619~Arg917

**Tags:** N-terminal His-tag

**Purity:** >95%

**Endotoxin Level:** <1.0EU per 1µg (determined by the LAL method).

**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

**Original Concentration:** 200µg/mL

**Applications:** Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

**Predicted isoelectric point:** 5.5

**Predicted Molecular Mass:** 34.2kDa

**Accurate Molecular Mass:** 37kDa as determined by SDS-PAGE reducing conditions.

## **[ USAGE ]**

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

## **[ STORAGE AND STABILITY ]**

**Storage:** Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

## **[ SEQUENCE ]**

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WT KGFKASGCEG EDVVTLLKEA IHRREEFDLD
VVAVVNDTVG TMMTCGFEDP HCEVGLIVGT GSNACYMEEM RNVELVEGEE
GRMCVNMEWG AFGDNGCLDD FRTEFDVAVD ELSLNPQKQR FEKMISGMYL
GEIVRNILID FTKRGLLFRG RISERLKTRG IFETKFLSQI ESDCLALLQV
RAILQHLGLE STCDDSIIVK EVCTVVARRA AQLCGAGMAA VVDRIENRG
LDALKVTVGV DGTLYKLHPH FAKVMHETVK DLAPKCDVSF LQSEDSGSGK
AALITAVACR IREAGQR
```

## **[ ACTIVITY ]**

Hexokinase 2 (HK2), also referred to as Hexokinase type II or Muscle form hexokinase, is an enzyme that belongs to the hexokinase family. This protein is widely expressed in a variety of tissues, especially in muscle and heart, and is highly expressed in many types of cancer. HK2 is a multifaceted enzyme that is essential for glucose metabolism and has been implicated in a wide range of cellular processes and diseases, including cancer and immune regulation. Besides, Hexokinase 1 (HK1) has been identified as an interactor of HK2, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human HK2 and recombinant human HK1. Briefly, HK2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to HK1-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-HK2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50  $\mu$ L stop solution to the wells and read at 450/630nm immediately. The

binding activity of recombinant human HK2 and recombinant human HK1 was shown in Figure 1, the EC50 for this effect is 0.12ug/mL.

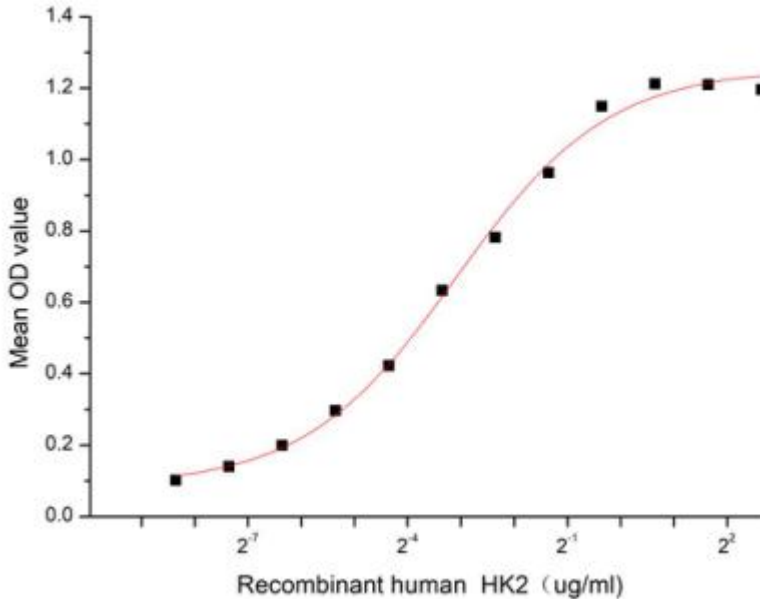


Figure 1. The binding activity of recombinant human HK2 and human HK1

**[ IDENTIFICATION ]**

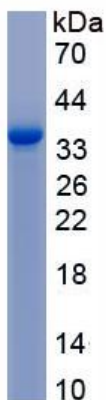


Figure 2. SDS-PAGE

Sample: Active recombinant HK2, Human

**[ IMPORTANT NOTE ]**

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.