

**HK2 (Hexokinase II) Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP8140a**

**Specification**

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**HK2 (Hexokinase II) Antibody (N-term) - Product Information**

Application	<b>WB, IHC-P,E</b>
Primary Accession	<a href="#">P52789</a>
Other Accession	<a href="#">P27881</a> , <a href="#">Q1W674</a> , <a href="#">O08528</a>
Reactivity	<b>Human</b>
Predicted	<b>Mouse, Pig, Rat</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Isotype	<b>Rabbit IgG</b>
Antigen Region	<b>91-121</b>

**HK2 (Hexokinase II) Antibody (N-term) - Additional Information**

**Gene ID** 3099

**Other Names**

Hexokinase-2, Hexokinase type II, HK II, Muscle form hexokinase, HK2

**Target/Specificity**

This HK2 (Hexokinase II) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 91-121 amino acids from the N-terminal region of human HK2 (Hexokinase II).

**Dilution**

WB~~1:1000  
IHC-P~~1:50~100

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

HK2 (Hexokinase II) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**HK2 (Hexokinase II) Antibody (N-term) - Protein Information**

**Name** HK2 ([HGNC:4923](#))

**Function** Catalyzes the phosphorylation of hexose, such as D-glucose and D-fructose, to hexose 6-phosphate (D-glucose 6-phosphate and D-fructose 6-phosphate, respectively) (PubMed:[23185017](#), PubMed:[26985301](#), PubMed:[29298880](#)). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (PubMed:[29298880](#)). Plays a key role in maintaining the integrity of the outer mitochondrial membrane by preventing the release of apoptogenic molecules from the intermembrane space and subsequent apoptosis (PubMed:[18350175](#)).

#### Cellular Location

Mitochondrion outer membrane; Peripheral membrane protein. Cytoplasm, cytosol Note=The mitochondrial-binding peptide (MBP) region promotes association with the mitochondrial outer membrane (PubMed:[29298880](#)) The interaction with the mitochondrial outer membrane via the mitochondrial-binding peptide (MBP) region promotes higher stability of the protein (PubMed:[29298880](#)). Release from the mitochondrial outer membrane into the cytosol induces permeability transition pore (PTP) opening and apoptosis (PubMed:[18350175](#)).

#### Tissue Location

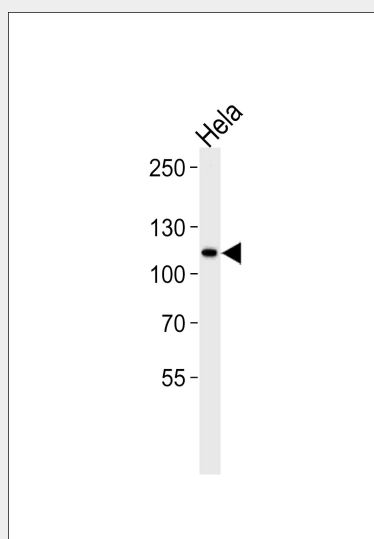
Predominant hexokinase isozyme expressed in insulin-responsive tissues such as skeletal muscle

### HK2 (Hexokinase II) Antibody (N-term) - Protocols

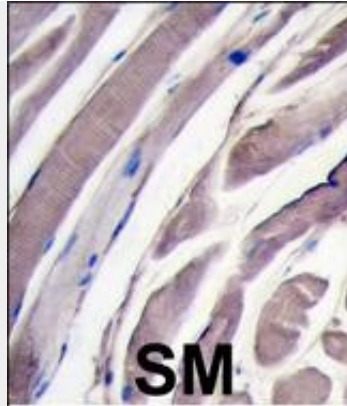
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### HK2 (Hexokinase II) Antibody (N-term) - Images



HK2 Antibody (E106) (Cat. #AP8140a) western blot analysis in HeLa cell line lysates (35ug/lane). This demonstrates the HK2 antibody detected the HK2 protein (arrow).



Formalin-fixed and paraffin-embedded human skeletal muscle tissue reacted with HK2 antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

### **HK2 (Hexokinase II) Antibody (N-term) - Background**

In vertebrates there are four major glucose-phosphorylating isoenzymes, designated hexokinase I, II, III, and IV. Hexokinase is an allosteric enzyme inhibited by its product GLC-6-P. Hexokinase activity is involved in the first step in several metabolic pathways. HK3 is bound to the outer mitochondrial membrane. Its hydrophobic N-terminal sequence may be involved in membrane binding. It is the predominant hexokinase isozyme expressed in insulin-responsive tissues such as skeletal muscle. The N- and C-terminal halves of this hexokinase show extensive sequence similarity to each other. The catalytic activity is associated with the C-terminus while regulatory function is associated with the N-terminus. Although found in NIDDM patients, genetic variations of HK2 do not contribute to the disease.

### **HK2 (Hexokinase II) Antibody (N-term) - References**

Lehto, M., et al., Diabetologia 38(12):1466-1474 (1995).  
Vidal-Puig, A., et al., Diabetes 44(3):340-346 (1995).  
Laakso, M., et al., Diabetes 44(3):330-334 (1995).  
Echwald, S.M., et al., Diabetes 44(3):347-353 (1995).  
Shinohara, Y., et al., Cancer Lett. 82(1):27-32 (1994).

### **HK2 (Hexokinase II) Antibody (N-term) - Citations**

- [Circ\\_0046599 Promotes the Development of Hepatocellular Carcinoma by Regulating the miR-1258/RPN2 Network](#)
- [Analyses of resected human brain metastases of breast cancer reveal the association between up-regulation of hexokinase 2 and poor prognosis.](#)