

**Anti-Hexokinase 1 Antibody**  
Rabbit polyclonal antibody to Hexokinase 1  
Catalog # AP60316

**Specification**

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**Anti-Hexokinase 1 Antibody - Product Information**

Application	WB, IF
Primary Accession	<a href="#">P19367</a>
Other Accession	<a href="#">P17710</a>
Reactivity	Human, Mouse, Rat, Zebrafish, Pig, Chicken, Bovine, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	102486

**Anti-Hexokinase 1 Antibody - Additional Information**

Gene ID 3098

**Other Names**

Hexokinase-1; Brain form hexokinase; Hexokinase type I; HK I

**Target/Specificity**

Recognizes endogenous levels of Hexokinase 1 protein.

**Dilution**

WB~~WB (1/500 - 1/1000), IH (1/100 - 1/200), IF/IC (1/100 - 1/500)

IF~~WB (1/500 - 1/1000), IH (1/100 - 1/200), IF/IC (1/100 - 1/500)

**Format**

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**Anti-Hexokinase 1 Antibody - Protein Information**

Name HK1 ([HGNC:4922](#))

**Function**

Catalyzes the phosphorylation of various hexoses, such as D- glucose, D-glucosamine, D-fructose, D-mannose and 2-deoxy-D-glucose, to hexose 6-phosphate (D-glucose 6-phosphate, D-glucosamine 6-phosphate, D-fructose 6-phosphate, D-mannose 6-phosphate and 2-deoxy-D-glucose 6- phosphate, respectively) (PubMed:<a href="http://www.uniprot.org/citations/1637300" target="\_blank">1637300</a>, PubMed:<a href="http://www.uniprot.org/citations/25316723" target="\_blank">25316723</a>, PubMed:<a href="http://www.uniprot.org/citations/27374331" target="\_blank">27374331</a>). Does not

phosphorylate N-acetyl-D-glucosamine (PubMed:<a href="http://www.uniprot.org/citations/27374331" target="\_blank">27374331</a>). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (By similarity). Involved in innate immunity and inflammation by acting as a pattern recognition receptor for bacterial peptidoglycan (PubMed:<a href="http://www.uniprot.org/citations/27374331" target="\_blank">27374331</a>). When released in the cytosol, N-acetyl-D-glucosamine component of bacterial peptidoglycan inhibits the hexokinase activity of HK1 and causes its dissociation from mitochondrial outer membrane, thereby activating the NLRP3 inflammasome (PubMed:<a href="http://www.uniprot.org/citations/27374331" target="\_blank">27374331</a>).

#### Cellular Location

Mitochondrion outer membrane; Peripheral membrane protein. Cytoplasm, cytosol. Note=The mitochondrial-binding peptide (MBP) region promotes association with the mitochondrial outer membrane (Probable). Dissociates from the mitochondrial outer membrane following inhibition by N-acetyl-D-glucosamine, leading to relocation to the cytosol (PubMed:27374331).

#### Tissue Location

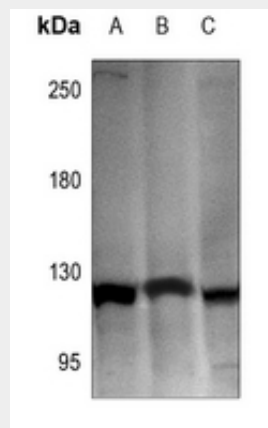
Isoform 2: Erythrocyte specific (Ref.6). Isoform 3: Testis-specific (PubMed:10978502). Isoform 4: Testis-specific (PubMed:10978502). {ECO:0000269|PubMed:10978502, ECO:0000269|Ref.6}

### Anti-Hexokinase 1 Antibody - Protocols

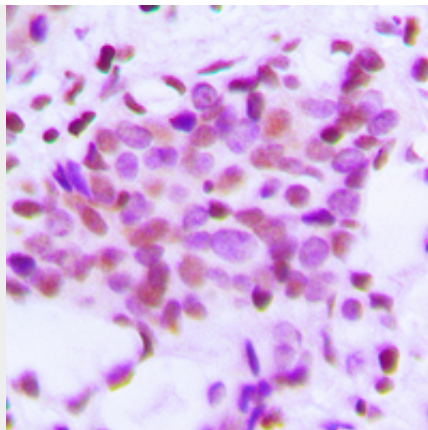
Provided below are standard protocols that you may find useful for product applications.

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

### Anti-Hexokinase 1 Antibody - Images



Western blot analysis of Hexokinase 1 expression in U87MG (A), MCF7 (B), C6 (C) whole cell lysates.



Immunohistochemical analysis of Hexokinase 1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Hexokinase 1 staining in HEK293T cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

#### **Anti-Hexokinase 1 Antibody - Background**

KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human Hexokinase 1. The exact sequence is proprietary.