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HK1 antibody - N-terminal region
Rabbit Polyclonal Antibody
Catalog # AI14605

Specification

HK1 antibody - N-terminal region - Product Information

Application	**WB**
Primary Accession	P19367
Other Accession	NM_033498, NP_277033
Reactivity	**Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine, Guinea Pig, Dog**
Predicted	**Human, Mouse, Rabbit, Pig, Chicken, Horse, Bovine, Guinea Pig, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**103kDa KDa**

HK1 antibody - N-terminal region - Additional Information

Gene ID 3098

Alias Symbol	**HK1-ta, HK1-tb, HK1-tc, HKI, HXK1**

Other Names
Hexokinase-1, 2.7.1.1, Brain form hexokinase, Hexokinase type I, HK I, HK1

Format
Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage
Add 50 ul of distilled water. Final anti-HK1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

Precautions
HK1 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

HK1 antibody - N-terminal region - 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:1637300, PubMed:25316723, PubMed:27374331). Does not

phosphorylate N-acetyl-D-glucosamine (PubMed:27374331). 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:27374331). 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:27374331).

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).

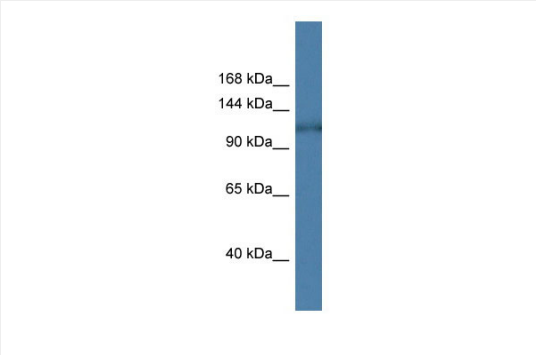
Tissue Location
Isoform 2: Erythrocyte specific (Ref.6). Isoform 3: Testis-specific (PubMed:10978502). Isoform 4: Testis-specific (PubMed:10978502). {ECO:0000269|PubMed:10978502, ECO:0000269|Ref.6}

HK1 antibody - N-terminal region - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HK1 antibody - N-terminal region - Images



WB Suggested Anti-HK1 Antibody Titration: 1.0 µg/ml
Positive Control: Fetal Heart

HK1 antibody - N-terminal region - References

Nishi S.,et al.Biochem. Biophys. Res. Commun. 157:937-943(1988).
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Deloukas P.,et al.Nature 429:375-381(2004).
Andreoni F.,et al.Biochim. Biophys. Acta 1493:19-26(2000).
Murakami K.,et al.Blood 90:272-272(1998).