

HK1 / Hexokinase 1 Antibody (clone 3A10)
Mouse Monoclonal Antibody
Catalog # ALS15739**Specification**

HK1 / Hexokinase 1 Antibody (clone 3A10) - Product Information

Application	IF
Primary Accession	P19367
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	102kDa KDa

HK1 / Hexokinase 1 Antibody (clone 3A10) - Additional Information**Gene ID** 3098**Other Names**

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

Target/Specificity

Human Hexokinase 1 / HK1

Reconstitution & Storage

Long term: -20°C; Short term: +4°C; Avoid freeze-thaw cycles.

Precautions

HK1 / Hexokinase 1 Antibody (clone 3A10) is for research use only and not for use in diagnostic or therapeutic procedures.

HK1 / Hexokinase 1 Antibody (clone 3A10) - 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](http://www.uniprot.org/citations/1637300), PubMed:<[a href="http://www.uniprot.org/citations/25316723" target="_blank">25316723](http://www.uniprot.org/citations/25316723), PubMed:<[a href="http://www.uniprot.org/citations/27374331" target="_blank">27374331](http://www.uniprot.org/citations/27374331)). Does not phosphorylate N-acetyl-D-glucosamine (PubMed:<[a href="http://www.uniprot.org/citations/27374331" target="_blank">27374331](http://www.uniprot.org/citations/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:<[a href="http://www.uniprot.org/citations/27374331" target="_blank">27374331](http://www.uniprot.org/citations/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

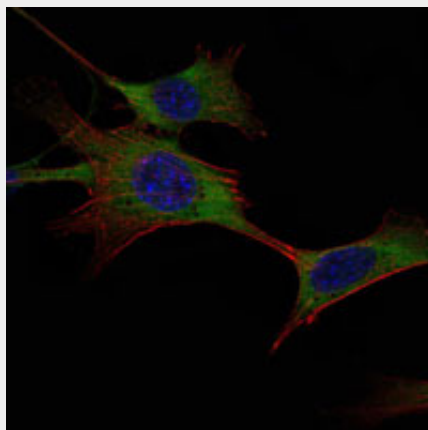
Isoform 2: Erythrocyte specific (Ref.6). Isoform 3: Testis-specific (PubMed:10978502). Isoform 4: Testis-specific (PubMed:10978502). {ECO:0000269|PubMed:10978502, ECO:0000269|Ref.6}

HK1 / Hexokinase 1 Antibody (clone 3A10) - 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](#)

HK1 / Hexokinase 1 Antibody (clone 3A10) - Images



Immunofluorescence of NIH/3T3 cells using HK1 mouse monoclonal antibody (green).

HK1 / Hexokinase 1 Antibody (clone 3A10) - References

Nishi S.,et al.Biochem. Biophys. Res. Commun. 157:937-943(1988).
Ruzzo A.,et al.Biochem. J. 331:607-613(1998).
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).