10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

HK1 / Hexokinase 1 Antibody (aa1-917, clone 4D7)

Mouse Monoclonal Antibody
Catalog # ALS12555

Specification

HK1 / Hexokinase 1 Antibody (aa1-917, clone 4D7) - Product Information

Application	**IHC, WB**
Primary Accession	P19367
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**102kDa KDa**

HK1 / Hexokinase 1 Antibody (aa1-917, clone 4D7) - Additional Information

Gene ID 3098

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

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

Precautions
HK1 / Hexokinase 1 Antibody (aa1-917, clone 4D7) is for research use only and not for use in diagnostic or therapeutic procedures.

HK1 / Hexokinase 1 Antibody (aa1-917, clone 4D7) - 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:<a

href="http://www.uniprot.org/citations/27374331" target="_blank">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).

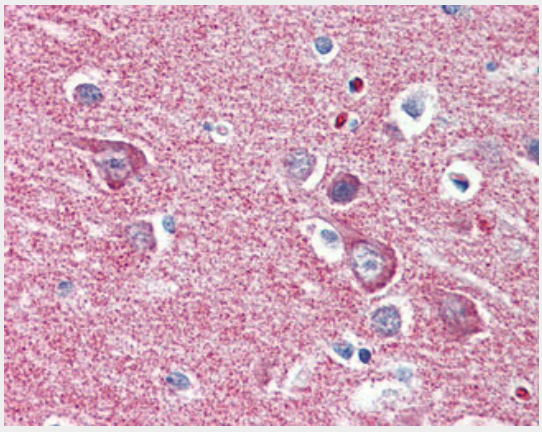
Tissue Location
Isoform 2: Erythrocyte specific (Ref.6). Isoform 3: Testis-specific (PubMed:10978502). Isoform 4: Testis-specific (PubMed:10978502). {ECO:0000269|PubMed:10978502, ECO:0000269|Ref.6}

HK1 / Hexokinase 1 Antibody (aa1-917, clone 4D7) - Protocols

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

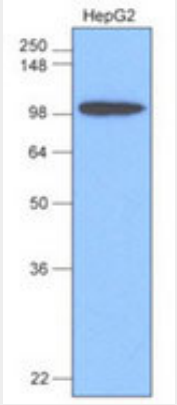
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HK1 / Hexokinase 1 Antibody (aa1-917, clone 4D7) - Images



Anti-HK1 / Hexokinase 1 antibody IHC of human brain, cortex.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Cell lysates of HepG2 (30 ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed...

HK1 / Hexokinase 1 Antibody (aa1-917, clone 4D7) - 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).