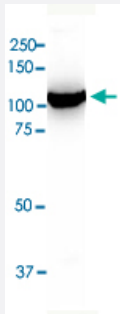


HK1 monoclonal antibody, clone 4D7

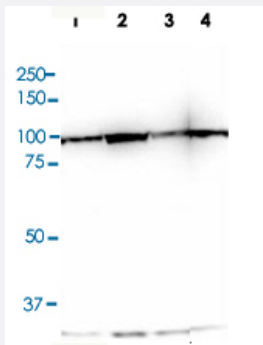
Catalog # MAB1101 Size 100 uL

Applications



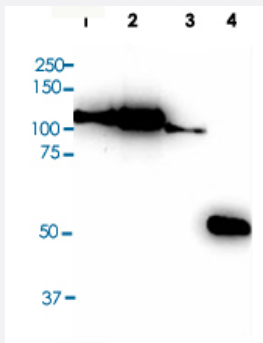
Western Blot (Tissue lysate)

Western blot analysis of mouse brain tissue lysate.



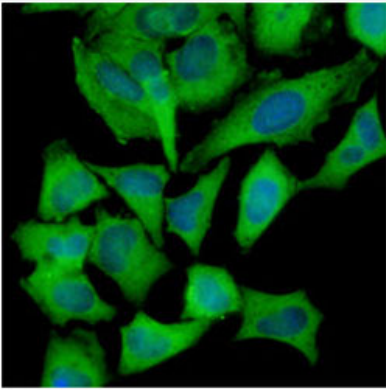
Western Blot (Cell lysate)

Western blot analysis of Lane 1: HepG2 cell lysate; Lane 2: HeLa cell lysate; Lane 3: Jurkat cell lysate; Lane 4: K562 cell lysate.



Western Blot (Recombinant protein)

Western blot analysis of Lane 1: Hexokinase 1 recombinant protein; Lane 2: Hexokinase 2 recombinant protein; Lane 3: Hexokinase 3 recombinant protein; Lane 4: Hexokinase 4 recombinant protein.



Immunofluorescence

Immunofluorescence analysis of HeLa cells. The cell was stained with HK1 monoclonal antibody, clone 4D7 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

Specification

Product Description	Mouse monoclonal antibody raised against full length recombinant HK1.
Immunogen	Recombinant protein corresponding to full length human HK1.
Host	Mouse
Reactivity	Human
Form	Liquid
Purification	Protein G purification
Isotype	IgG2a, kappa
Recommend Usage	ELISA Immunocytochemistry Immunofluorescence Western Blot The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS, pH 7.4 (10% glycerol, 0.02% sodium azide).
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Applications

- Western Blot (Tissue lysate)

Western blot analysis of mouse brain tissue lysate.

- Western Blot (Cell lysate)

Western blot analysis of Lane 1: HepG2 cell lysate; Lane 2: HeLa cell lysate; Lane 3: Jurkat cell lysate; Lane 4: K562 cell lysate.

- Western Blot (Recombinant protein)

Western blot analysis of Lane 1: Hexokinase 1 recombinant protein; Lane 2: Hexokinase 2 recombinant protein; Lane 3: Hexokinase 3 recombinant protein; Lane 4: Hexokinase 4 recombinant protein.

- Immunocytochemistry

- Immunofluorescence

Immunofluorescence analysis of HeLa cells. The cell was stained with HK1 monoclonal antibody, clone 4D7 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

- Enzyme-linked Immunoabsorbent Assay

Gene Info — HK1

Entrez GeneID	3098
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GeneBank Accession#	NM_000188
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Protein Accession#	NP_000179
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Gene Name	HK1
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Gene Alias	HK1-ta, HK1-tb, HK1-tc, HKI, HXK1
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Gene Description	hexokinase 1
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Omim ID	142600
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Gene Ontology	Hyperlink
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Gene Summary	Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes a ubiquitous form of hexokinase which localizes to the outer membrane of mitochondria. Mutations in this gene have been associated with hemolytic anemia due to hexokinase deficiency. Alternative splicing of this gene results in five transcript variants which encode different isoforms, some of which are tissue-specific. Each isoform has a distinct N-terminus; the remainder of the protein is identical among all the isoforms. A sixth transcript variant has been described, but due to the presence of several stop codons, it is not thought to encode a protein. [provided by RefSeq]
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Other Designations

OTTHUMP00000019725|brain form hexokinase|glycolytic enzyme

Publication Reference

- [Isozymes of mammalian hexokinase: structure, subcellular localization and metabolic function.](#)

Wilson JE.

The Journal of Experimental Biology 2003 Jun; 206(Pt 12):2049.

- [Sequence of human hexokinase III cDNA and assignment of the human hexokinase III gene \(HK3\) to chromosome band 5q35.2 by fluorescence in situ hybridization.](#)

Furuta H, Nishi S, Le Beau MM, Fernald AA, Yano H, Bell GI.

Genomics 1996 Aug; 36(1):206.

- [Studies on the mechanism of orthophosphate regulation of bovine brain hexokinase.](#)

Ellison WR, Lueck JD, Fromm HJ.

The Journal of Biological Chemistry 1975 Mar; 250(5):1864.

Pathway

- [Amino sugar and nucleotide sugar metabolism](#)
- [Biosynthesis of alkaloids derived from histidine and purine](#)
- [Biosynthesis of alkaloids derived from ornithine](#)
- [Biosynthesis of alkaloids derived from shikimate pathway](#)
- [Biosynthesis of alkaloids derived from terpenoid and polyketide](#)
- [Biosynthesis of phenylpropanoids](#)
- [Biosynthesis of plant hormones](#)
- [Biosynthesis of terpenoids and steroids](#)
- [Fructose and mannose metabolism](#)
- [Galactose metabolism](#)
- [Glycolysis / Gluconeogenesis](#)

- [Insulin signaling pathway](#)
- [Metabolic pathways](#)
- [Starch and sucrose metabolism](#)
- [Streptomycin biosynthesis](#)
- [Type II diabetes mellitus](#)

Disease

- [Alzheimer Disease](#)
- [Attention Deficit Disorder with Hyperactivity](#)
- [Diabetes Mellitus](#)
- [Diseases in Twins](#)
- [Genetic Predisposition to Disease](#)
- [Obesity](#)
- [Tobacco Use Disorder](#)