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Hexokinase 1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52715

Product Information

Application	WB
Primary Accession	P19367
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	102486

Additional Information

Gene ID	3098
Other Names	BB404130; Brain form hexokinase; dea; EC 2.7.1.1; Glycolytic enzyme; HEXOKIN; Hexokinase PI; Hexokinase type I; Hexokinase, tumor isozyme; Hexokinase-1; Hexokinase-A; HK I; HK1; HK1 tb; Hk1-s; HK1-ta; HK1-tb; HK1-tc; HKD; HKI; HMSNR; HXK1; HXK1_HUMAN; mHk1-s.
Dilution	WB~~1:1000
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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

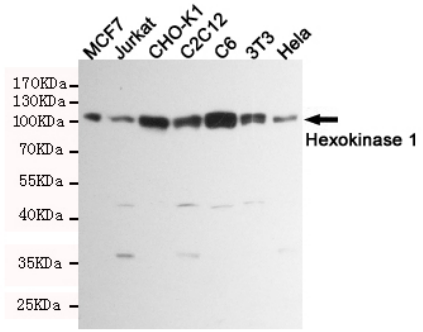
(PubMed:27374331).

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}

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).

Images



Western blot detection of Hexokinase 1 in MCF7,Jurkat,CHO-K1,C2C12,C6,3T3 and Hela cell lysates using Hexokinase 1 mouse mAb (1:1000 diluted). Predicted band size:102KDa. Observed band size:102KDa.

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