

Hexokinase I Rabbit mAb

Catalog # AP75535

Product Information

| | |
|-------------------|------------------------|
| Application | WB, IHC-P, IHC-F, ICC |
| Primary Accession | P19367 |
| Reactivity | Human, Mouse, Rat |
| Host | Rabbit |
| Clonality | Monoclonal Antibody |
| Calculated MW | 102486 |

Additional Information

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|-------------|--|
| Gene ID | 3098 |
| Other Names | HK1 |
| Dilution | WB~~1/500-1/1000 IHC-P~~N/A IHC-F~~N/A ICC~~N/A |
| Format | 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA. |
| Storage | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |

Protein Information

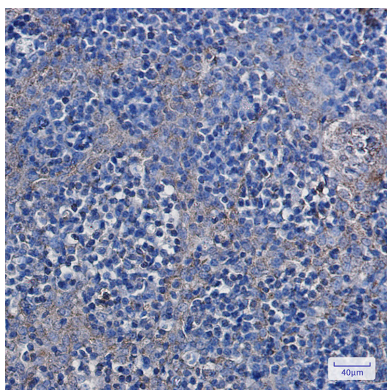
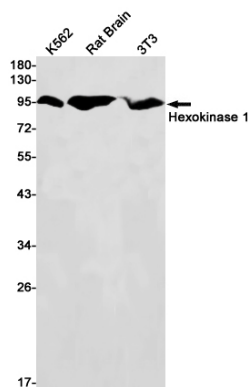
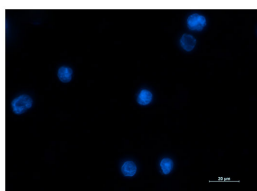
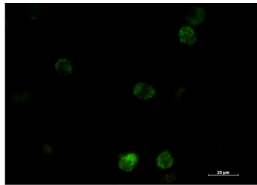
| | |
|-------------------|--|
| Name | HK1 (HGNC:4922) |
| Function | Catalyzes the phosphorylation of various hexoses, such as D- glucose, D-glucosamine, D-fructose, D-mannose and 2-deoxy-D-glucose, to hexose 6-phosphate (D-glucose 6-phosphate, D-glucosamine 6-phosphate, D-fructose 6-phosphate, D-mannose 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}

Images



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