KD-Validated Anti-Hexokinase 1 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI2361

Specification

KD-Validated Anti-Hexokinase 1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P19367
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 102 kDa, observed, 102 kDa KDa**
Gene Name	**HK1**
Aliases	**Brain Form Hexokinase; Hexokinase Type I; Hexokinase-1; Hexokinase-A; EC 2.7.1.1; Neuropathy, Hereditary Motor And Sensory, Russe Type; Glycolytic Enzyme; Hexokinase IR; Hexokinase; EC 2.7.1; NEDVIBA; HK1-Ta; HK1-Tb; HK1-Tc; HMSNR; HXK1; NMSR; RP79; HK I; HKD; HKI; HK**
Immunogen	**A synthesized peptide derived from human Hexokinase 1**

KD-Validated Anti-Hexokinase 1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**3098**

Other Names
Hexokinase-1, 2.7.1.1, Brain form hexokinase, Hexokinase type I, HK I, Hexokinase-A, HK1 (HGNC:4922)

KD-Validated Anti-Hexokinase 1 Rabbit Monoclonal Antibody - 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}

**KD-Validated Anti-Hexokinase 1 Rabbit Monoclonal Antibody - Protocols**

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

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

**KD-Validated Anti-Hexokinase 1 Rabbit Monoclonal Antibody - Images**
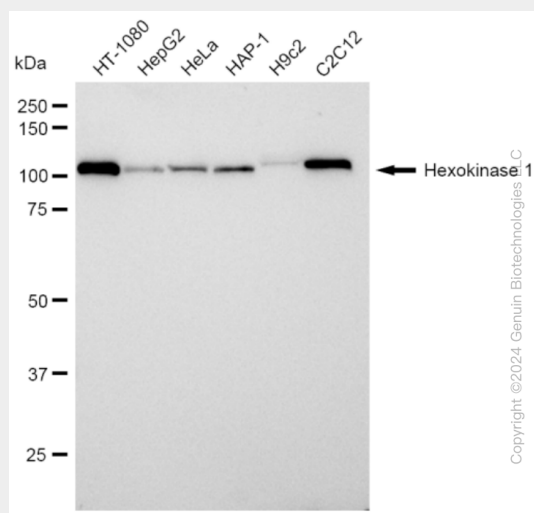
Western blotting analysis using anti-Hexokinase 1 antibody (Cat#AGI2361). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Hexokinase 1 antibody (Cat#AGI2361, 1:5,000) and HRP-conjugated goat anti rabbit secondary antibody respectively.
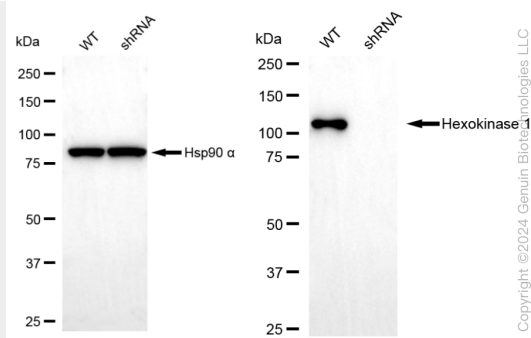
Western blotting analysis using anti-Hexokinase 1 antibody (Cat#AGI2361). Hexokinase 1 expression in wild type (WT) and Hexokinase 1 shRNA knockdown (KD) HeLa cells with 30 μg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-Hexokinase 1 antibody (Cat#AGI2361,1:5,000) and HRP-conjugated goat anti rabbit secondary antibody respectively.
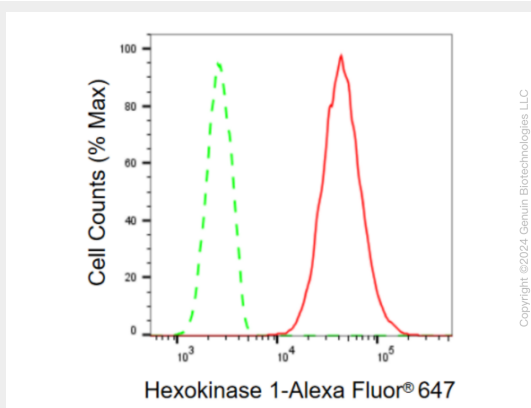
Flow cytometric analysis of Hexokinase 1 expression in HT-1080 cells using Hexokinase 1 antibody (Cat#AGI2361,1:2,000). Green, isotype control; red, Hexokinase 1
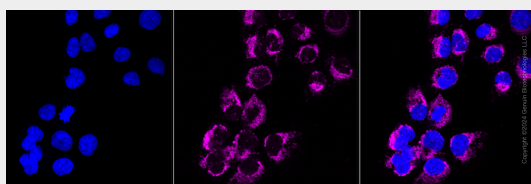
Immunocytochemical staining of HT-1080 cells with Hexokinase 1 antibody (Cat#AGI2361, 1:1,000). Nuclei were stained blue with DAPI; Hexokinase 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 μm.