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KD-Validated Anti-NAGK Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2175

Specification

KD-Validated Anti-NAGK Mouse Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	Q9UJ70
Reactivity	**Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 37 kDa, observed, 35 kDa KDa**
Gene Name	**NAGK**
Aliases	**NAGK; N-Acetylglucosamine Kinase; GNK; N-Acetyl-D-Glucosamine Kinase; N-Acetyl-D-Mannosamine Kinase; Muramyl Dipeptide Kinase; GlcNAc Kinase; EC 2.7.1.59; Epididymis Secretory Sperm Binding Protein; EC 2.7.1.60; EC 2.7.1.-; HSA242910**
Immunogen	**Recombinant protein of human NAGK**

KD-Validated Anti-NAGK Mouse Monoclonal Antibody - Additional Information

Gene ID	**55577**

Other Names
N-acetyl-D-glucosamine kinase, N-acetylglucosamine kinase, 2.7.1.59, GlcNAc kinase, Muramyl dipeptide kinase, 2.7.1.-, N-acetyl-D-mannosamine kinase, 2.7.1.60, NAGK {ECO:0000303|PubMed:36002575, ECO:0000312|HGNC:HGNC:17174}

KD-Validated Anti-NAGK Mouse Monoclonal Antibody - Protein Information

Name NAGK {ECO:0000303|PubMed:36002575, ECO:0000312|HGNC:HGNC:17174}

Function
Converts endogenous N-acetylglucosamine (GlcNAc), a major component of complex carbohydrates, from lysosomal degradation or nutritional sources into GlcNAc 6-phosphate (PubMed:22692205). Involved in the N-glycolylneuraminic acid (Neu5Gc) degradation pathway: although human is not able to catalyze formation of Neu5Gc due to the inactive CMAHP enzyme, Neu5Gc is present in food and must be degraded (PubMed:22692205). Also has N-acetylmannosamine (ManNAc) kinase activity (By similarity). Also involved in innate immunity by promoting detection of bacterial peptidoglycan by NOD2: acts by catalyzing phosphorylation of muramyl dipeptide (MDP), a fragment of bacterial peptidoglycan, to generate 6-O-phospho-muramyl dipeptide, which acts as a direct ligand for NOD2 (PubMed:36002575).

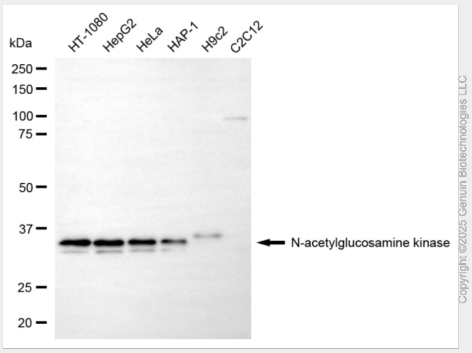
Tissue Location
Ubiquitous..

KD-Validated Anti-NAGK Mouse Monoclonal Antibody - Protocols

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

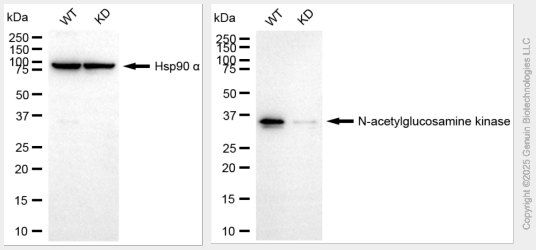
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-NAGK Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-N-acetylglucosamine kinase antibody (Cat#65080). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-N-acetylglucosamine kinase antibody (Cat#65080, 1:2,000) and HRP-conjugated goat anti-mouse secondary antibody (Cat#101, 1:20,000) respectively. Image was developed using FeQ™ ECL Substrate Kit (Cat#226).

Western blotting analysis using anti-N-acetylglucosamine kinase antibody (Cat#AGI2175). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-N-acetylglucosamine kinase antibody (Cat#AGI2175, 1:2,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-N-acetylglucosamine kinase antibody (Cat#AGI2175). N-acetylglucosamine kinase expression in wild-type (WT) and N-acetylglucosamine kinase (NAGK) knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-N-acetylglucosamine kinase antibody (Cat#AGI2175, 1:2,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.

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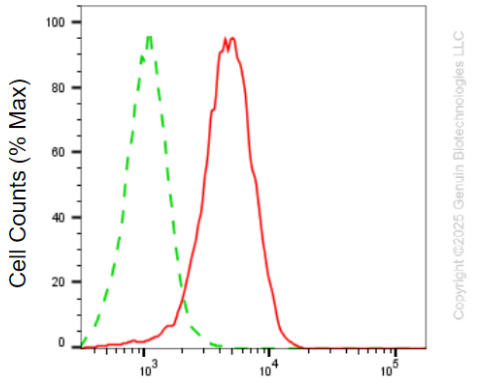

Flow cytometric analysis of N-acetylglucosamine kinase expression in HepG2 cells using anti-N-acetylglucosamine kinase antibody (Cat#AGI2175, 1:2,000). Green, isotype control; red, N-acetylglucosamine kinase.