

**NAGK Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7080A****Specification**

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**NAGK Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">O9UJ70</a>
Other Accession	<a href="#">Q3SZM9</a> , <a href="#">NP_060037</a>
Reactivity	Human, Mouse
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	37376
Antigen Region	31-61

**NAGK Antibody (N-term) - Additional Information****Gene ID** 55577**Other Names**

N-acetyl-D-glucosamine kinase, N-acetylglucosamine kinase, GlcNAc kinase, NAGK

**Target/Specificity**

This NAGK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 31-61 amino acids from the N-terminal region of human NAGK.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

NAGK Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**NAGK Antibody (N-term) - 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**

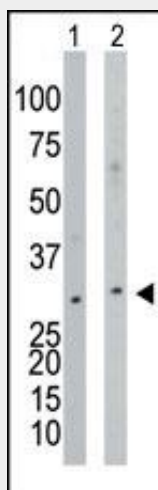
Ubiquitous..

#### **NAGK Antibody (N-term) - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **NAGK Antibody (N-term) - Images**



The anti-NAGK Pab (Cat. #AP7080a) is used in Western blot to detect NAGK in mouse thymus tissue lysate (Lane 1) and Y79 cell lysate (Lane 2).

#### **NAGK Antibody (N-term) - Background**

N-acetylglucosamine kinase (NAGK) converts endogenous N-acetylglucosamine (GlcNAc), a major component of complex carbohydrates, from lysosomal degradation or nutritional sources into GlcNAc 6-phosphate. NAGK belongs to the group of N-acetylhexosamine kinases and is a prominent salvage enzyme of amino sugar metabolism in mammals. The predicted 344-amino acid NAGK protein contains the 5 sequence motifs necessary for the binding of ATP by sugar kinases. NAGK shares 91.6% amino acid similarity with mouse Nagk, for which enzyme activity is detectable in all

mouse tissues examined, with highest enzymatic activity in testis. It is hypothesized that NAGK has a general role in the catabolic pathways of GlcNAc as well as of ManNAc.

#### **NAGK Antibody (N-term) - References**

Hinderlich, S., et al., Eur. J. Biochem. 267(11):3301-3308 (2000).  
Lowes, W., et al., Biochim. Biophys. Acta 1379(1):134-142 (1998).  
Weidanz, J.A., et al., Br. J. Haematol. 95(4):645-653 (1996).