



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

GlcNAc kinase (m): 293T Lysate: sc-120498

BACKGROUND

GlcNAc kinase, also known as GNK or NAGK (N-acetylglucosamine kinase), is a 344 amino acid homodimeric protein that is ubiquitously expressed. Belonging to the sugar kinase/HSP 70/Actin superfamily and the eukaryotic-type N-acetylglucosamine kinase family, GlcNAc kinase converts endogenous N-acetylglucosamine (GlcNAc), a major component of complex carbohydrates, from lysosomal degradation or nutritional sources into GlcNAc 6-phosphate. GlcNAc kinase is considered a salvage enzyme of amino sugar metabolism in mammals and predominately produces the β anomer of phosphorylated sugars. It is suggested that GlcNAc kinase has ManNAc kinase activity.

REFERENCES

1. Mattia, E., et al. 1982. Induction of germ tube formation by N-acetyl-D-glucosamine in *Candida albicans*: uptake of inducer and germinative response. *J. Bacteriol.* 152: 555-562.
2. Meglasson, M.D., et al. 1983. Chromatographic resolution and kinetic characterization of glucokinase from islets of Langerhans. *Proc. Natl. Acad. Sci. USA* 80: 85-89.
3. Hinderlich, S., et al. 1998. Purification and characterization of N-acetylglucosamine kinase from rat liver—comparison with UDP-N-acetylglucosamine 2-epimerase/N-acetylmannosamine kinase. *Eur. J. Biochem.* 252: 133-139.
4. Hinderlich, S., et al. 2000. Molecular cloning and characterization of murine and human N-acetylglucosamine kinase. *Eur. J. Biochem.* 267: 3301-3308.
5. Yamada-Okabe, T., et al. 2001. Identification and characterization of the genes for N-acetylglucosamine kinase and N-acetylglucosamine-phosphate deacetylase in the pathogenic fungus *Candida albicans*. *Eur. J. Biochem.* 268: 2498-2505.
6. Perez-Arellano, I., et al. 2006. Mapping active site residues in glutamate-5-kinase. The substrate glutamate and the feed-back inhibitor proline bind at overlapping sites. *FEBS Lett.* 580: 6247-6253.
7. Yang, C., et al. 2006. Comparative genomics and experimental characterization of N-acetylglucosamine utilization pathway of *Shewanella oneidensis*. *J. Biol. Chem.* 281: 29872-29885.
8. Weihofen, W.A., et al. 2006. Structures of human N-acetylglucosamine kinase in two complexes with N-acetylglucosamine and with ADP/glucose: insights into substrate specificity and regulation. *J. Mol. Biol.* 364: 388-399.
9. Blume, A., et al. 2008. Characterization of ligand binding to N-acetylglucosamine kinase studied by STD NMR. *Biochemistry* 47: 13138-13146.

CHROMOSOMAL LOCATION

Genetic locus: Nagk (mouse) mapping to 6 C3.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

GlcNAc kinase (m): 293T Lysate represents a lysate of mouse GlcNAc kinase transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

GlcNAc kinase (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive GlcNAc kinase antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.