SANTA CRUZ BIOTECHNOLOGY, INC.

GlcNAc kinase (G-20): sc-82613

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.

CHROMOSOMAL LOCATION

Genetic locus: NAGK (human) mapping to 2p13.3; Nagk (mouse) mapping to 6 C3.

SOURCE

GlcNAc kinase (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GlcNAc kinase of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-82613 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

GlcNAc kinase (G-20) is recommended for detection of GlcNAc kinase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GlcNAc kinase (G-20) is also recommended for detection of GlcNAc kinase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GlcNAc kinase siRNA (h): sc-75136, GlcNAc kinase siRNA (m): sc-75137, GlcNAc kinase shRNA Plasmid (h): sc-75136-SH, GlcNAc kinase shRNA Plasmid (m): sc-75137-SH, GlcNAc kinase shRNA (h) Lentiviral Particles: sc-75136-V and GlcNAc kinase shRNA (m) Lentiviral Particles: sc-75137-V.

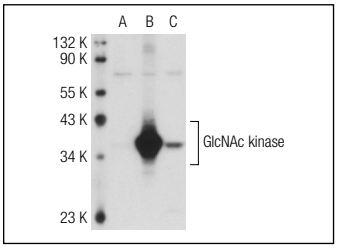
Molecular Weight of GlcNAc kinase: 37 kDa.

Positive Controls: GlcNAc kinase (m): 293T Lysate: sc-120498 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GlcNAc kinase (G-20): sc-82613. Western blot analysis of GlcNAc kinase expression in non-transfected 293T: sc-117752 (**A**), mouse GlcNAc kinase transfected 293T: sc-120498 (**B**) and HeLa (**C**) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **GlcNAc kinase (G-5): sc-390499**, our highly recommended monoclonal alternative to GlcNAc kinase (G-20).