

FN3K (H-59): sc-134828

BACKGROUND

Amines, including those present on proteins, spontaneously react with glucose to make fructosamines in a reaction termed glycation. Fructosamine 3-kinase (FN3K), a 309-amino acid enzyme initially identified in erythrocytes, catalyzes the ATP-dependent phosphorylation of the third carbon on both D- and L-fructosamines, leading to their destabilization and eventually, their removal from the protein. FN3K is a monomer that is ubiquitously expressed in mammalian tissue and phosphorylates both low molecular mass and protein-bound fructosamines which are formed as a result of glycation of glucose with primary amines. FN3K protects proteins from the harmful effects of nonenzymatic glycation, and may also be involved in peptide repair and cell metabolism. Abnormal expression of FN3K may lead to diabetic complications.

REFERENCES

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6. Delpierre, G., et al. 2006. Variability in E with polymorphisms in the FN3K gene and impacts on haemoglobin glycation at specific sites. *Diabetes Metab.* 32: 31-39.
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CHROMOSOMAL LOCATION

Genetic locus: FN3K (human) mapping to 17q25.3; Fn3k (mouse) mapping to 11 E2.

SOURCE

FN3K (H-59) is a rabbit polyclonal antibody raised against amino acids 53-111 mapping near the N-terminus of FN3K 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.

APPLICATIONS

FN3K (H-59) is recommended for detection of FN3K 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).

FN3K (H-59) is also recommended for detection of FN3K in additional species, including equine and bovine.

Suitable for use as control antibody for FN3K siRNA (h): sc-60647, FN3K siRNA (m): sc-60648, FN3K shRNA Plasmid (h): sc-60647-SH, FN3K shRNA Plasmid (m): sc-60648-SH, FN3K shRNA (h) Lentiviral Particles: sc-60647-V and FN3K shRNA (m) Lentiviral Particles: sc-60648-V.

Molecular Weight of FN3K: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or mouse thymus extract: sc-2406.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

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.