

Fucokinase (E-12): sc-136691

BACKGROUND

Blood group antigen recognition, metastasis and inflammation utilize fucose, a sugar found in glycoproteins and glycolipids. Fucokinase, also designated L-fucose kinase or FUK, is a 1,084 amino acid enzyme that plays a role in the salvage pathway of fucose reutilization. A member of the GHMP kinase family, Fucokinase exists as two alternative splice variants and catalyzes L-fucose phosphorylation to form β -L-fucose 1-phosphate. The gene encoding Fucokinase maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

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- Hinderlich, S., et al. 2002. Identification of human L-fucose kinase amino acid sequence. *Biochem. Biophys. Res. Commun.* 294: 650-654.
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CHROMOSOMAL LOCATION

Genetic locus: FUK (human) mapping to 16q22.1; Fuk (mouse) mapping to 8 E1.

SOURCE

Fucokinase (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Fucokinase of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-136691 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Fucokinase (E-12) is recommended for detection of Fucokinase isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Fucokinase (E-12) is also recommended for detection of Fucokinase isoforms 1 and 2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Fucokinase siRNA (h): sc-93356, Fucokinase siRNA (m): sc-145269, Fucokinase shRNA Plasmid (h): sc-93356-SH, Fucokinase shRNA Plasmid (m): sc-145269-SH, Fucokinase shRNA (h) Lentiviral Particles: sc-93356-V and Fucokinase shRNA (m) Lentiviral Particles: sc-145269-V.

Molecular Weight of Fucokinase: 118 kDa.

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) 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.

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.



Try **Fucokinase (F-9): sc-377371**, our highly recommended monoclonal alternative to Fucokinase (E-12).