

FN3KRP (G-1): sc-376717

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. FN3KRP (fructosamine-3-kinase-related protein) is a 309 amino acid protein that is expressed in erythrocytes, bone marrow, spleen, brain and kidney and belongs to the fructosamine kinase family. FN3KRP functions to phosphorylate psicosamines and ribulosamines on the third carbon of their sugar moiety, thereby leading to the deglycation of the target amines.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611683. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Collard, F., et al. 2003. A mammalian protein homologous to fructosamine-3-kinase is a ketosamine-3-kinase acting on psicosamines and ribulosamines but not on fructosamines. *Diabetes* 52: 2888-2895.
3. Conner, J.R., et al. 2004. The expression of the genes for fructosamine-3-kinase and fructosamine-3-kinase-related protein appears to be constitutive and unaffected by environmental signals. *Biochem. Biophys. Res. Commun.* 323: 932-936.

CHROMOSOMAL LOCATION

Genetic locus: FN3KRP (human) mapping to 17q25.3; Fn3kpr (mouse) mapping to 11 E2.

SOURCE

FN3KRP (G-1) is a mouse monoclonal antibody raised against amino acids 143-202 mapping within an internal region of FN3KRP of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FN3KRP (G-1) is available conjugated to agarose (sc-376717 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376717 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376717 PE), fluorescein (sc-376717 FITC), Alexa Fluor® 488 (sc-376717 AF488), Alexa Fluor® 546 (sc-376717 AF546), Alexa Fluor® 594 (sc-376717 AF594) or Alexa Fluor® 647 (sc-376717 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376717 AF680) or Alexa Fluor® 790 (sc-376717 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

FN3KRP (G-1) is recommended for detection of FN3KRP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for FN3KRP siRNA (h): sc-93888, FN3KRP siRNA (m): sc-145210, FN3KRP shRNA Plasmid (h): sc-93888-SH, FN3KRP shRNA Plasmid (m): sc-145210-SH, FN3KRP shRNA (h) Lentiviral Particles: sc-93888-V and FN3KRP shRNA (m) Lentiviral Particles: sc-145210-V.

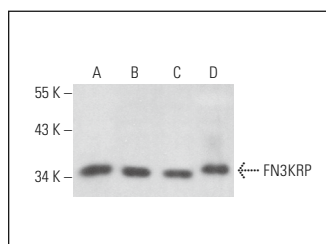
Molecular Weight of FN3KRP: 34 kDa.

Positive Controls: FN3KRP (h): 293T Lysate: sc-371352, K-562 whole cell lysate: sc-2203 or MCF7 whole cell lysate: sc-2206.

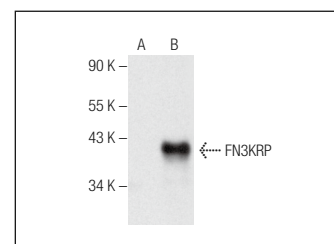
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



FN3KRP (G-1): sc-376717. Western blot analysis of FN3KRP expression in HEK293 (A), MCF7 (B) and K-562 (C) whole cell lysates and human fetal brain tissue extract (D).



FN3KRP (G-1): sc-376717. Western blot analysis of FN3KRP expression in non-transfected: sc-117752 (A) and human FN3KRP transfected: sc-371352 (B) 293T whole cell lysates.

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.