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FN3K Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55085

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q9H479
Reactivity	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35171
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human FN3K
Epitope Specificity	201-309/309
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the fructosamine kinase family.
SUBUNIT	Monomer (Probable).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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 psicoamines and ribulosamines on the third carbon of their sugar moiety, thereby leading to the deglycation of the target amines.

Additional Information

Gene ID	64122
Other Names	Fructosamine-3-kinase, 2.7.1.171, Protein-psicosamine 3-kinase FN3K, Protein-ribulosamine 3-kinase FN3K, 2.7.1.172, FN3K {ECO:0000303|PubMed:14633848, ECO:0000312|HGNC:HGNC:24822}

Target/Specificity	Expressed in erythrocytes.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	FN3K {ECO:0000303|PubMed:14633848, ECO:0000312|HGNC:HGNC:24822}
Function	Fructosamine-3-kinase involved in protein deglycation by mediating phosphorylation of fructoselysine residues on glycated proteins, to generate fructoselysine-3 phosphate (PubMed:11016445, PubMed:11522682, PubMed:11975663). Fructoselysine-3 phosphate adducts are unstable and decompose under physiological conditions (PubMed:11522682, PubMed:11975663). Involved in intracellular deglycation in erythrocytes (PubMed:11975663). Involved in the response to oxidative stress by mediating deglycation of NFE2L2/NRF2, glycation impairing NFE2L2/NRF2 function (By similarity). Also able to phosphorylate psicosamines and ribulosamines (PubMed:14633848).
Tissue Location	Widely expressed (PubMed:11522682). Expressed in erythrocytes (PubMed:11016445).