SANTA CRUZ BIOTECHNOLOGY, INC.

Riboflavin kinase (G-20): sc-66625

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The Power to Question

BACKGROUND

Riboflavin kinase, also known as RFK or RIFK, is a cytoplasmic protein that catalyzes the first step in flavocoenzyme biosynthesis, namely the ATP-dependent phosphorylation of riboflavin to form flavin-mononucleotide (FMN). Expressed in the brain, placenta and bladder, Riboflavin kinase is a 162 amino acid protein for which zinc and magnesium are cofactors. Riboflavin kinase has three distinct conformational states that are referred to as the binary MgADP complex, the ternary product complex and the apo form, all of which contribute to the unique substrate binding and catalytic activity of the enzyme. Human Riboflavin kinase shares 44% homology with its yeast counterpart, suggesting that the three flexible regions surrounding the active site (termed Flap I, Flap II and Helix B) are similar in both species.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: RFK (human) mapping to 9q21.13; Rfk (mouse) mapping to 19 B.

SOURCE

Riboflavin kinase (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Riboflavin kinase of human origin.

RESEARCH USE

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

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-66625 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Riboflavin kinase (G-20) is recommended for detection of Riboflavin 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).

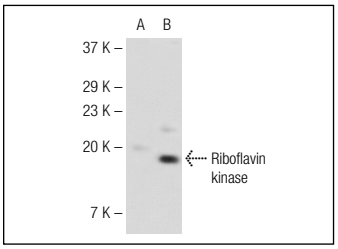
Riboflavin kinase (G-20) is also recommended for detection of Riboflavin kinase in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for Riboflavin kinase siRNA (h): sc-62940, Riboflavin kinase siRNA (m): sc-62941, Riboflavin kinase shRNA Plasmid (h): sc-62940-SH, Riboflavin kinase shRNA Plasmid (m): sc-62941-SH, Riboflavin kinase shRNA (h) Lentiviral Particles: sc-62940-V and Riboflavin kinase shRNA (m) Lentiviral Particles: sc-62941-V.

Molecular Weight of Riboflavin kinase: 18 kDa.

Positive Controls: Riboflavin kinase (m): 293T Lysate: sc-123131.

DATA



Riboflavin kinase (G-20): sc-66625. Western blot analysis of Riboflavin kinase expression in non-transfected: sc-117752 (**A**) and mouse Riboflavin kinase transfected: sc-123131 (**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.