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SANTA CRUZ BIOTECHNOLOGY, INC.

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

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 (mouse) mapping to 19 B.

PRODUCT

Riboflavin kinase (m): 293T Lysate represents a lysate of mouse Riboflavin kinase transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Riboflavin kinase (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Riboflavin kinase antibodies. Recommended use: 10-20 µl per lane.

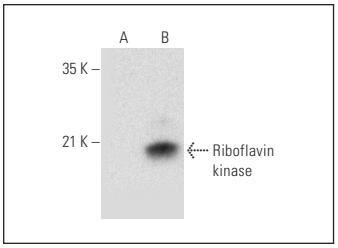
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Riboflavin kinase (E-7): sc-398830 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Riboflavin kinase expression in Riboflavin kinase transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



Riboflavin kinase (E-7): sc-398830. 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.