

RFK Protein, Human (His)

Cat. No.:	HY-P73677
Synonyms:	Riboflavin kinase; Flavokinase; RFK; ATP:riboflavin 5'-phosphotransferase
Species:	Human
Source:	E. coli
Accession:	Q969G6 (M1-H155)
Gene ID:	55312
Molecular Weight:	Approximately 18 kDa

PROPERTIES

AA Sequence	<pre> MRHLPLYFCRG QVVRGFGRGS KQLGIP TANF PEQVVDNLPA DISTGIYYGW ASVGS GDVHK MVVSI GWNPY YKNTK KSMET HIMHTFKEDF YGEILNVAIV GYLRPEKNFD SLESLSA IQ GDIEEAKKRL ELPEHLKIKE DNFFQVSKSK IMNGH </pre>
Biological Activity	Measured by its ability to combine with the substrate ATP and riboflavin reaction produces the ADP ability to measure. The specific activity is 3681.943 pmol/min/μg, as measured under the described conditions.
Appearance	Solution
Formulation	Supplied as a 0.2 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 8.0, 10% Glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	<p>The RFK protein serves as the rate-limiting enzyme in the synthesis of flavin adenine dinucleotide (FAD) by catalyzing the phosphorylation of riboflavin (vitamin B2) to form flavin-mononucleotide (FMN). This enzymatic activity is essential for the production of FAD, a crucial cofactor involved in various redox reactions within cells. Beyond its role in riboflavin metabolism, RFK has been implicated in the regulation of reactive oxygen species (ROS) production induced by tumor necrosis factor (TNF). Through its interaction with TNFRSF1A and CYBA, RFK physically and functionally couples TNFRSF1A to NADPH oxidase, a key enzyme complex in ROS generation. TNF activation of RFK may enhance the incorporation of FAD in</p>
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NADPH oxidase, highlighting the importance of RFK in orchestrating critical steps for the assembly and activation of this oxidative stress-inducing enzyme complex.

Caution: Product has not been fully validated for medical applications. For research use only.

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