

Mouse RPE / RPE2-1 Protein (His Tag)

Catalog Number: 50968-M08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

RPE2-1; 2810429B02Rik; 5730518J08Rik

Protein Construction:

A DNA sequence encoding the mouse RPE (Q8VEE0) (Met1-Arg228) was expressed with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant mouse RPE comprises 239 amino acids and has a predicted molecular mass of 26.4 kDa. The apparent molecular mass of the protein is approximately 27 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

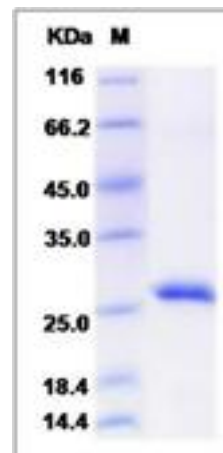
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The "ribulose phosphate binding" superfamily defined by the Structural Classification of Proteins (SCOP) database is considered the result of divergent evolution from a common (beta/alpha)₈-barrel ancestor. The superfamily includes d-ribulose 5-phosphate 3-epimerase (RPE), orotidine 5'-monophosphate decarboxylase (OMPDC), and 3-keto-l-gulonate 6-phosphate decarboxylase (KGPDC). Replication of the human genome requires the activation of thousands of replicons distributed along each one of the chromosomes. Each replicon contains an initiation, or origin, site, at which DNA synthesis begins. In enzymology, a L-ribulose-5-phosphate 3-epimerase is an enzyme that catalyzes the chemical reaction L-ribulose 5-phosphate to L-xylulose 5-phosphate. Hence, RPE has one substrate, L-ribulose 5-phosphate, and one product, L-xylulose 5-phosphate. RPE belongs to the family of isomerases, specifically those racemases and epimerases acting on carbohydrates and derivatives. The systematic name of this enzyme class is L-ribulose-5-phosphate 3-epimerase. Other names in common use include L-xylulose 5-phosphate 3-epimerase, UlaE, and SgaU.

References

1. Yew WS, et al., 2002, J. Bacteriol. 184 (1): 302-6.
2. Shimaoka, M. et al., 2005, Biosci Biotechnol Biochem 69 (7):1248-55.
3. Salinero, KK. et al., 2009, BMC Genomics 10 :351.

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