

RPE Protein, Mouse (HEK293, His)

Cat. No.:	HY-P73673
Synonyms:	Ribulose-Phosphate 3-Epimerase; RPE; HUSSY-17
Species:	Mouse
Source:	HEK293
Accession:	Q8VEE0 (M1-R228)
Gene ID:	66646
Molecular Weight:	Approximately 27 kDa

PROPERTIES

AA Sequence	<p> M A S G C K I G P S I L N S D L A N L G A E C L R M L D S G A D Y L H L D V M D G H F V P N I T F G H P V V E S L R K Q L G Q D P F F D M H M M V S R P E Q W V K P M A V A G A N Q Y T F H L E A T E N P G A L I K D I R E N G M K V G L A I K P G T T V E Y L A P W A N Q I D M A L V M T V E P G F G G Q K F M E D M M P K V H W L R T Q F P T L D I E V D G G V G P D T V Q K C A E A G A N M I V S G S A I M R S D D P R A V I N L L R N V C S E A A Q K R S L D R </p>
Biological Activity	Data is not available.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Ribulose-5-phosphate epimerase (RPE) is an enzyme that catalyzes the reversible epimerization of D-ribulose 5-phosphate to D-xylulose 5-phosphate. This enzymatic activity is a key step in the non-oxidative phase of the pentose phosphate pathway, a metabolic pathway essential for the interconversion of sugars and the generation of pentose phosphates. The reversible conversion of ribulose 5-phosphate to xylulose 5-phosphate by RPE contributes to the synthesis of various
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important cellular components, including nucleotides and coenzymes. The intricate regulation of the pentose phosphate pathway, facilitated by enzymes like RPE, ensures a balanced supply of ribose-5-phosphate for nucleotide biosynthesis and NADPH for redox reactions within the cell. Understanding the functions of RPE provides insights into the regulation of sugar metabolism and its significance in cellular processes.

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

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