

## QDPR Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P71092
<b>Synonyms:</b>	Dihydropteridine Reductase; HDHPR; Quinoid Dihydropteridine Reductase; QDPR; DHPR
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P09417 (A2-F244)
<b>Gene ID:</b>	5860
<b>Molecular Weight:</b>	Approximately 29.0 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> A A A A A A G E A R   R V L V Y G G R G A   L G S R C V Q A F R   A R N W W V A S V D V V E N E E A S A S   I I V K M T D S F T   E Q A D Q V T A E V   G K L L G E E K V D A I L C V A G G W A   G G N A K S K S L F   K N C D L M W K Q S   I W T S T I S S H L A T K H L K E G G L   L T L A G A K A A L   D G T P G M I G Y G   M A K G A V H Q L C Q S L A G K N S G M   P P G A A A I A V L   P V T L D T P M N R   K S M P E A D F S S W T P L E F L V E T   F H D W I T G K N R   P S S G S L I Q V V   T T E G R T E L T P A Y F </pre>
<b>Biological Activity</b>	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris-HCl, pH 8.0.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	Quinoid dihydropteridine reductase (QDPR) is an enzyme that plays a critical role in the metabolism of biopterin compounds. Specifically, QDPR catalyzes the conversion of quinonoid dihydrobiopterin into tetrahydrobiopterin, a crucial cofactor in various biological processes. Tetrahydrobiopterin is involved in the synthesis of neurotransmitters, such as
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serotonin and dopamine, and serves as a cofactor for enzymes like phenylalanine hydroxylase, which is essential for amino acid metabolism. By facilitating the reduction of quinonoid dihydrobiopterin, QDPR contributes to the recycling and regeneration of tetrahydrobiopterin, ensuring its availability for various cellular processes. It has to highlight QDPR's specific catalytic function in the biopterin pathway, emphasizing its importance in maintaining the balance of biopterin cofactors critical for neurotransmitter synthesis and other essential biochemical reactions.

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

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