

GMPR Protein, Human (HEK293, His)

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| Cat. No.: | HY-P70955 |
| Synonyms: | GMP Reductase 1; Guanosine 5' -Monophosphate Oxidoreductase 1; Guanosine Monophosphate Reductase 1; GMPR; GMPR1 |
| Species: | Human |
| Source: | HEK293 |
| Accession: | AAH08281.1 (M1-S345) |
| Gene ID: | 2766 |
| Molecular Weight: | Approximately 40.0 kDa |

PROPERTIES

AA Sequence

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| M P R I D A D L K L | D F K D V L L R P K | R S S L K S R A E V | D L E R T F T F R N |
| S K Q T Y S G I P I | I V A N M D T V G T | F E M A A V M S Q H | S M F T A I H K H Y |
| S L D D W K L F A T | N H P E C L Q N V A | V S S G S G Q N D L | E K M T S I L E A V |
| P Q V K F I C L D V | A N G Y S E H F V E | F V K L V R A K F P | E H T I M A G N V V |
| T G E M V E E L I L | S G A D I I K V G V | G P G S V C T T R T | K T G V G Y P Q L S |
| A V I E C A D S A H | G L K G H I I S D G | G C T C P G D V A K | A F G A G A D F V M |
| L G G M F S G H T E | C A G E V F E R N G | R K L K L F Y G M S | S D T A M N K H A G |
| G V A E Y R A S E G | K T V E V P Y K G D | V E N T I L D I L G | G L R S T C T Y V G |
| A A K L K E L S R R | A T F I R V T Q Q H | N T V F S | |

Biological Activity The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

Appearance Solution.

Formulation Supplied as a 0.2 µm filtered solution of 20 mM Tris-HCl, 40% Glycerol, 0.15 M NaCl and 1 mM DTT, pH 8.0.

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

GMP reductase 1 (GMPR1) catalyzes the irreversible NADPH-dependent deamination of GMP to IMP. GMPR1 functions in the conversion of nucleobase, nucleoside and nucleotide derivatives of G to A nucleotides, and in maintaining the intracellular

balance of A and G nucleotides.

The GMPR1 expression is up-regulated by cold exposure, indicating that GMPR1 may contribute to non-shivering thermogenesis. However, GMPR also increases in Alzheimer's disease, since IMP can be converted to AMP and adenosine A, which can bind to A1/A2 receptors (important for mediation of Tau phosphorylation), leading to the progression of Alzheimer's disease^{[1][2]}.

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

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