

## FDPS Protein, Mouse (His)

<b>Cat. No.:</b>	HY-P75196
<b>Synonyms:</b>	Farnesyl pyrophosphate synthase; FPP synthase; CR 39; Fdps
<b>Species:</b>	Mouse
<b>Source:</b>	E. coli
<b>Accession:</b>	Q920E5 (M1-K353)
<b>Gene ID:</b>	110196
<b>Molecular Weight:</b>	Approximately 42.8 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>M N G N Q K L D A Y    N Q E K Q N F I Q H    F S Q I V K V L T E    K E L G H P E I G D</p> <p>A I A R L K E V L E    Y N A L G G K Y N R    G L T V V Q A F Q E    L V E P K K Q D A E</p> <p>S L Q R A L T V G W    C V E L L Q A F F L    V S D D I M D S S L    T R R G Q I C W Y Q</p> <p>K P G I G L D A I N    D A L L L E A S I Y    R L L K F Y C R E Q    P Y Y L N L L E L F</p> <p>L Q S S Y Q T E I G    Q T L D L M T A P Q    G H V D L G R Y T E    K R Y K S I V K Y K</p> <p>T A F Y S F Y L P I    A A A M Y M A G I D    G E K E H A N A L K    I L M E M G E F F Q</p> <p>V Q D D Y L D L F G    D P S V T G K V G T    D I Q D N K C S W L    V V Q C L L R A S P</p> <p>Q Q R Q I L E E N Y    G Q K D P E K V A R    V K A L Y E A L D L    Q S A F F K Y E E D</p> <p>S Y N R L K S L I E    Q C S A P L P P S I    F M E L A N K I Y K    R R K</p>
<b>Biological Activity</b>	Measured in a cell proliferation assay using H4 human neuroglioma cells. The ED <sub>50</sub> for this effect is 2.560 ng/mL. Corresponding to a specific activity is 3.906×10 <sup>[5]</sup> Unit/mg.
<b>Appearance</b>	Lyophilized powder
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, 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

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**Background**

Farnesyl diphosphate synthase (FDPS) emerges as a pivotal enzyme in isoprenoid biosynthesis, driving the crucial formation of farnesyl diphosphate (FPP). FPP, a key precursor for various essential metabolites such as sterols, dolichols, carotenoids, and ubiquinones, also serves as a substrate for protein farnesylation and geranylgeranylation. The catalytic activity of FDPS involves the sequential condensation of isopentenyl pyrophosphate with the allylic pyrophosphates, first with dimethylallyl pyrophosphate and then with the resulting geranylpyrophosphate, ultimately yielding the essential product, farnesyl pyrophosphate. This intricate enzymatic process underscores FDPS's central role in the synthesis of fundamental cellular components and post-translational modifications critical for diverse cellular functions.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA