

## FDPS Protein, Mouse (His)

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

### PROPERTIES

AA Sequence	MNGNQKLDAY    NQEKQNF IQH    FSQIVKVLTE    KELGHPEIGD AIARLKEVLE    YNALGGKYNR    GLTVVQAFQE    LVEPKKQDAE SLQRALTVGW    CVELLQAFFL    VSDDIMDSSL    TRRGQICWYQ KPGIGLDAIN    DALLLEASIY    RLLKFYCREQ    PYYLNLLLELF LQSSYQTEIG    QTLDLMTAPQ    GHVDLGRYTE    KRYKSIVKYK TAFYSFYLP I    AAAMYMAGID    GEKEHANALK    ILMEMGEFFQ VQDDYLDLFG    DPSVTGKVG T    DIQDNKCSWL    VVQC LLRASP QQRQILEENY    GQKDPEKVAR    VKALYEALDL    QSAFFKYEED SYNRLKSLIE    QCSAPLP P S I    FMELANKIYK    R R K
Biological Activity	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.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 8.0.
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 <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).
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

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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.**

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