FDFT1 Protein, Human (His)

Cat. No.:	HY-P72193
Synonyms:	DGPT; ERG9; Farnesyl diphosphate farnesyltransferase; Farnesyl-diphosphate farnesyltransferase; FDFT_HUMAN; FDFT1; FPP:FPP farnesyltransferase; SQS; Squalene synthase; Squalene synthetase; SS
Species:	Human
Source:	E. coli
Accession:	P37268 (E2-H417)
Gene ID:	2222
Molecular Weight:	Approximately 52 kDa

PROPERTIES

AA Sequence	E F V K C L G H P E E F Y N L V R F R I G G K R K V M P K M D Q D S L S S S L K T C Y K Y L N Q T S R S F A A V I Q A L D G E M R N A V C I F Y L V L R A L D T L E D D M T I S V E K K V P L L H N F H S F L Y Q P D W R F M E S K E K D R Q V L E D F P T I S L E F R N L A E K Y Q T V I A D I C R R M G I G M A E F L D K H V T S E Q E W D K Y C H Y V A G L V G I G L S R L F S A S E F E D P L V G E D T E R A N S M G L F L Q K T N I I R D Y L E D Q Q G G R E F W P Q E V W S R Y V K K L G D F A K P E N I D L A V Q C L N E L I T N A L H H I P D V I T Y L S R L R N Q S V F N F C A I P Q V M A I A T L A A C Y N N Q Q V F K G A V K I R K G Q A V T L M M D A T N M P A V K A I I Y Q Y M E E I Y H R I P D S D P S S S K T R Q I I S T I R T Q N L P N C Q L I S R S H Y S P I Y L S F V M L L A A L S W Q Y L T T L S Q V T E D Y V Q T G E H
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm solution of Tris-based buffer, 50% Glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	FDFT1, or squalene synthase, is a crucial enzyme that plays a pivotal role in sterol biosynthesis. Functioning as the first committed enzyme in this pathway, FDFT1 catalyzes the condensation of two farnesyl pyrophosphate (FPP) molecules to form squalene through a two-step process. In the initial half-reaction, two FPP molecules react to generate the stable presqualene diphosphate intermediate (PSQPP), accompanied by the release of a proton and inorganic diphosphate. Subsequently, in the second half-reaction, PSQPP undergoes heterolysis, isomerization, and reduction with either NADPH or NADH, ultimately producing squalene. This enzymatic process is fundamental for the synthesis of sterols, highlighting the central role of FDFT1 in governing the initial steps of sterol biosynthesis.

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

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