

PHYH Protein, Human

Cat. No.:	HY-P76544
Synonyms:	Phytanoyl-CoA dioxygenase, peroxisomal; Phytanic acid oxidase; PhyH; PAHX
Species:	Human
Source:	E. coli
Accession:	O14832-1 (S31-L338)
Gene ID:	5264
Molecular Weight:	Approximately 32 kDa

PROPERTIES

AA Sequence	<pre> SGT I S S A S F H P Q Q F Q Y T L D N N V L T L E Q R K F Y E E N G F L V I K N L V P D A D I Q R F R N E F E K I C R K E V K P L G L T V M R D V T I S K S E Y A P S E K M I T K V Q D F Q E D K E L F R Y C T L P E I L K Y V E C F T G P N I M A M H T M L I N K P P D S G K K T S R H P L H Q D L H Y F P F R P S D L I V C A W T A M E H I S R N N G C L V V L P G T H K G S L K P H D Y P K W E G G V N K M F H G I Q D Y E E N K A R V H L V M E K G D T V F F H P L L I H G S G Q N K T Q G F R K A I S C H F A S A D C H Y I D V K G T S Q E N I E K E V V G I A H K F F G A E N S V N L K D I W M F R A R L V K G E R T N L </pre>
Biological Activity	Measured by its ability to catalyze a reaction to produce inorganic phosphates at 37°C for 30 min. The specific activity is 1104.22 pmol/min/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
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 ₂ 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

Background	PHYH protein plays a crucial role in cellular metabolism by catalyzing the 2-hydroxylation of various acyl-CoA esters,
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including racemic phytanoyl-CoA, isomers of 3-methylhexadecanoyl-CoA, and a diverse array of other mono-branched 3-methylacyl-CoA esters with a chain length of at least seven carbon atoms, as well as straight-chain acyl-CoA esters with a chain length longer than four carbon atoms. Notably, PHYH does not hydroxylate long and very long straight-chain acyl-CoAs or 2-methyl- and 4-methyl-branched acyl-CoAs, showcasing its substrate specificity. These enzymatic activities contribute to the regulation of lipid metabolism and cellular homeostasis, highlighting the importance of PHYH in maintaining metabolic balance.

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

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