Active Recombinant Human HMGCR protein, His-tagged

Cat. No. HMGCR-263H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human HMGCR(Ser426-Ala888) fused with an N-terminal Met and 6-His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	426-888 a.a.
Description	HMG-CoA reductase (HMGCR) is a transmembrane glycoprotein of the endoplasmic reticulum. It is the rate-limiting enzyme in cholesterol biosynthesis and converts HMG-CoA to mevalonate. Mevalonate can be converted to cholesterol through a series of enzymatic reactions, and can also serve as the precursor for several nonsterol isoprenoid compounds such as ubiquinone, dolichol, and the isopentenyl group of tRNA. The activity of HMGCR is finely regulated by a negative feedback mechanism in which cholesterol and the other end products of the metabolic pathway suppress the enzyme in a multivalent fashion. Cholesterol suppresses the reductase activity primarily by inhibiting the rate of transcription of the reductase gene. Cytosolic cholesterol is derived from the internalization and degradation of low density lipoprotein (LDL) via the LDL receptor. Competitive inhibitors of the reductase induce the expression of LDL receptors in the liver, which in turn increases the catabolism of plasma LDL and lowers the plasma concentration of cholesterol, an important determinant of atherosclerosis. The well-known inhibitors for HMGCR are statins, a class of hypolipidemic agents used as pharmaceuticals to lower cholesterol levels in

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	individuals at risk from cardiovascular disease due to hypercholesterolemia. The recombinant human HMGCR contains only the catalytic domain of the enzyme.
Predicted N Terminal	Met
Form	Supplied as a 0.2 μm filtered solution in Tris, NaCl, DTT and Glycerol.
Bio-activity	Measured by its ability to reduce HMG-CoA with NADPH. The specific activity is >6,000 pmol/min/μg.
Molecular Mass	Predicted Molecular Mass: 51 kDa SDS-PAGE: 51-61 kDa, reducing conditions
Endotoxin	<0.1 EU per 1 μg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70 centigrade as supplied. 3 months, -20 to -70 centigrade under sterile conditions after opening.

GENE INFORMATION

Gene Name	HMGCR 3-hydroxy-3-methylglutaryl-CoA reductase [Homo sapiens]
Official Symbol	HMGCR
Synonyms	HMGCR; 3-hydroxy-3-methylglutaryl-CoA reductase; 3 hydroxy 3 methylglutaryl Coenzyme A reductase; 3-hydroxy-3-methylglutaryl-Coenzyme A reductase; 3 hydroxy 3 methylglutaryl CoA reductase (NADPH); hydroxymethylglutaryl CoA

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	reductase; HMG-CoA reductase; hydroxymethylglutaryl-CoA reductase; 3-hydroxy-3-methylglutaryl CoA reductase (NADPH); LDLCQ3;
Gene ID	3156
mRNA Refseq	NM_000859
Protein Refseq	NP_000850
UniProt ID	P04035

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