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Product Information

3-Hydroxy-3-methylglutaryl-CoA Reductase, catalytic domain
human, recombinant
GST fusion protein expressed in *E. coli*

Catalog Number **H7039**
Storage Temperature –70 °C

EC 1.1.1.34
Synonyms: HMG CoA reductase, HMGR

Product Description

3-Hydroxy-3-methylglutaryl-CoA reductase (HMGR) catalyzes the committed step in cholesterol biosynthesis. HMGR inhibitors are effective in lowering serum cholesterol levels and are commonly referred to as statins. Human HMGR consists of a single polypeptide chain of 888 amino acids. The amino-terminal residues are bound in the endoplasmic reticulum membrane, while the catalytic site of the protein resides in the cytoplasmic, soluble C-terminal portion. A linker region connects the two portions of the protein.

The product is supplied as a solution containing 50 mM Tris-HCl, pH 7.5, with 5 mM DTT, 1:200 (v/v) Protease Inhibitor Cocktail (Catalog Number P8340), and 50% (w/v) glycerol. The protein concentration of every lot is detailed on the label.

Molecular mass: ~76 kDa

Purity: ≥90% (SDS-PAGE)

Specific activity: 2–8 units/mg protein

Unit definition: One unit will convert 1.0 µmole of NADPH to $NADP^+$ per minute at 37 °C. The activity measurement is a modified version of a published procedure.[2]
Note: For activity measurement the reaction mixture must contain 400–600 mM KCl. The addition of 1 mg/ml of BSA is strongly recommended and the presence of DTT is not required.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at –70 °C is recommended. Upon first use it is recommended to store the remaining enzyme in working aliquots at –70 °C. Repeated freeze thaw cycles are not recommended. The product retains activity for at least 2 years at –70 °C.

References

1. Istvan, E.S. et.al., Crystal structure of catalytic portion of human HMG-CoA reductase: insights into regulation of activity and catalysis. EMBO J., **19**, 819-830 (2000).
2. Bischoff, K.M., and Rodwell, V.W., 3-Hydroxy-3-methylglutaryl-coenzyme A reductase from *Haloferax volcanii*: purification, characterization, and expression in *Escherichia coli*. J. Bacteriol., **178**, 19-23 (1996).

FF,RS,EB,RBG,MAM 09/11-1