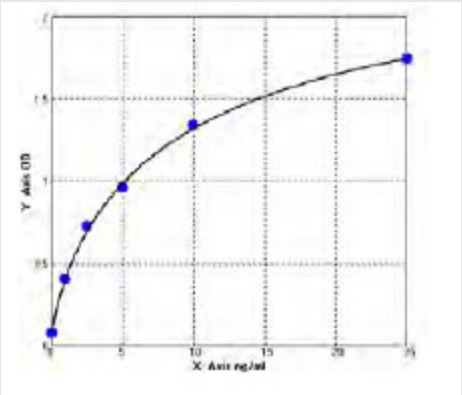
3 Hydroxy 3 Methylglutaryl Coa Reductase (HMGCR) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	3 Hydroxy 3 methylglutaryl CoA reductase (HMGCR), ELISA Kit
Full Product Name	Human 3 Hydroxy 3 methylglutaryl CoA reductase ELISA Kit
Product Gene Name	HMGCR elisa kit
Species Reactivity	Human
Assay Type	Quantitative Competitive
Samples	Serum, Plasma, Cell Culture Supernatants, Body Fluid And Tissue Homogenate
Sensitivity	1.0 ng/mL.
Preparation and Storage	Store all reagents at 2-8 degree C.
Molecular Weight	97,040 Da
Sample Preparation	We suggest pre-experimenting with neat (undiluted) samples, 1:2 or 1:4 dilutions. Please avoid diluting your samples more than 1:10 as it would exceed the dilution limit set for this kit. If the expected concentration of the target is beyond the detection range of the kit, please contact our technical support team
Product Categories/Family for HMGCR elisa kit	Cardiovascular
ISO Certification	Manufactured in an ISO 13485:2016 Certified Laboratory.
Related Product Information for HMGCR elisa kit	Intended Uses: This HMGB1 ELISA kit is a 1.5 hour solid-phase ELISA designed for the quantitative determination of Rat HMGB1. This ELISA kit for research use only! Principle of the Assay: HMGB1 ELISA kit applies the competitive enzyme immunoassay technique utilizing a polyclonal anti-HMGB1 antibody and an HMGB1-HRP conjugate. The assay sample and buffer are incubated together with HMGB1-HRP conjugate in pre-coated plate for one hour. After the incubation period, the wells are decanted and washed five times. The wells are then incubated with a substrate for HRP enzyme. The product of the enzyme-substrate reaction forms a blue colored complex. Finally, a stop solution is added to stop the reaction, which will then turn the solution yellow. The intensity of color is measured spectrophotometrically at 450nm in a microplate reader. The intensity of the color is inversely proportional to the HMGB1 concentration since HMGB1 from samples and HMGB1-HRP conjugate compete for the anti-HMGB1 antibody binding site. Since the number of sites is limited, as more sites are occupied by HMGB1 from the sample, fewer sites are left to bind HMGB1-HRP conjugate. A standard curve is plotted relating the intensity of the color (O.D.) to the concentration of standards. The HMGB1 concentration in each sample is interpolated from this standard curve.
Other Notes	Small volumes of HMGCR elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for HMGCR purchase	MBS742031 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the 3 Hydroxy 3 methylglutaryl CoA reductase (HMGCR) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing HMGCR. The ELISA analytical biochemical technique of the MBS742031 kit is based on HMGCR antibody-HMGCR antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect HMGCR antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, HMGCR. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of HMGCR elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HMGCR. It may not necessarily be applicable to this product.

NCBI GI #	160358778
NCBI GeneID	15357
NCBI Accession #	NP_032281.2
UniProt Secondary Accession #	Q5U4I2; G3X8U5
UniProt Related Accession #	Q01237
GenBank Nucleotide #	NM_008255.2
NCBI Official Full Name	3-hydroxy-3-methylglutaryl-coenzyme A reductase
NCBI Official Synonym Full Names	3-hydroxy-3-methylglutaryl-Coenzyme A reductase
NCBI Official Symbol	Hmgcr
NCBI Official Synonym Symbols	Red; HMG-CoAR
UniProt Protein Name	3-hydroxy-3-methylglutaryl-coenzyme A reductase
UniProt Gene Name	Hmgcr
UniProt Synonym Gene Names	HMG-CoA reductase
UniProt Entry Name	HMDH_MOUSE
NCBI Protein Information	3-hydroxy-3-methylglutaryl-coenzyme A reductase; HMG-CoA reductase; 3-hydroxy-3-methylglutaryl-CoA reductase

UniProt Comments for HMGCR	HMGCR: the rate-limiting enzyme for cholesterol synthesis. Regulated via a negative feedback mechanism mediated by sterols and non-sterol metabolites derived from mevalonate, the product of the reaction catalyzed by this reductase. Normally in mammalian cells this enzyme is suppressed by cholesterol 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. Protein type: Oxidoreductase; Motility/polarity/chemotaxis; Secondary Metabolites Metabolism - terpenoid backbone biosynthesis; Endoplasmic reticulum; Membrane protein, multi-pass; Membrane protein, integral; EC 1.1.1.34 Cellular Component: peroxisomal membrane; endoplasmic reticulum membrane; intracellular membrane-bound organelle; membrane; endoplasmic reticulum; integral to membrane Molecular Function: protein homodimerization activity; hydroxymethylglutaryl-CoA reductase (NADPH) activity; protein phosphatase 2A binding; hydroxymethylglutaryl-CoA reductase activity; oxidoreductase activity; coenzyme binding; NADP binding; oxidoreductase activity, acting on the CH-OH group of donors, NAD or NADP as acceptor Biological Process: steroid metabolic process; cholesterol metabolic process; negative regulation of MAP kinase activity; isoprenoid biosynthetic process; positive regulation of smooth muscle cell proliferation; positive regulation of skeletal muscle development; cholesterol biosynthetic process; positive regulation of stress-activated MAPK cascade; coenzyme A metabolic process; embryonic development; ubiquinone metabolic process; negative regulation of vasodilation; sterol biosynthetic process; positive regulation of cell proliferation; visual learning; lipid metabolic process; steroid biosynthetic process; protein tetramerization; negative regulation of apoptosis
Research Articles on HMGCR	**1.** Increased cholesterol synthesis mediated by HMGCoA-R under inflammatory stress may be one of the mechanisms for intracellular lipid accumulation and statin resistance.
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