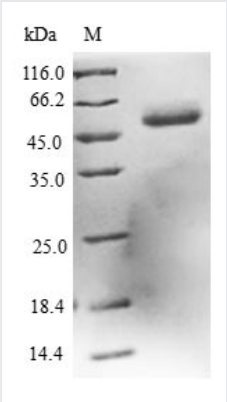
L-Xylulose Reductase (DCXR) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	L-xylulose reductase (DCXR), Recombinant Protein
Full Product Name	Recombinant Human L-xylulose reductase (DCXR)
Product Gene Name	DCXR recombinant protein
Product Synonym Names	L-xylulose reductase; XR; EC=1.1.1.10; Carbonyl reductase II; Dicarbonyl/L-xylulose reductase; Kidney dicarbonyl reductase; kiDCR; Sperm surface protein P34H
Sequence	MELFLAGRRV LVTGAGKGIG RGTVQALHAT GARVVAVSRT QADLDSLVRE CPGIEPVCVD LGDWEATERA LGSVGPVDLL VNNAAVALLQ PFLEVTKEAF DRSFEVNLRA VIQVSQIVAR GLIARGVPGA IVNVSSQCSQ RAVTNHSVYC STKGALDMLT KVMALELGPH KIRVNAVNPT VVMTSMGQAT WSDPHKAKTM LNRIPLGKFA EVEHVVNAIL FLLSDRSGMT TGSTLPVEGG FWAC
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	52.9 kDa
Sequence Positions	1-244aa; Full Length
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
OMIM	608347
3D Structure	ModBase 3D Structure for Q7Z4W1
Species	Homo sapiens (Human)
Product Categories/Family for DCXR recombinant protein	Signal Transduction
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for DCXR recombinant protein	Catalyzes the NADPH-dependent reduction of several pentoses, tetroses, trioses, alpha-dicarbonyl compounds and L-xylulose. Participates in the uronate cycle of glucose metabolism. May play a role in the water absorption and cellular osmoregulation in the proximal renal tubules by producing xylitol, an osmolyte, thereby preventing osmolytic stress from occurring in the renal tubules.
Other Notes	Small volumes of DCXR recombinant protein 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 DCXR purchase	MBS1453229 is a recombinant protein targeting DCXR. Also known as Recombinant Human L-xylulose reductase (DCXR). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.



SDS-PAGE of DCXR recombinant protein

ADDITIONAL DETAILS

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

NCBI GI #	304571975
NCBI GeneID	51181
NCBI Accession #	NP_001182147.1
UniProt Primary Accession #	Q7Z4W1
UniProt Secondary Accession #	Q9BTZ3; Q9UHY9
UniProt Related Accession #	Q7Z4W1
GenBank Nucleotide #	NM_001195218.1
NCBI Official Full Name	L-xylulose reductase isoform 2
NCBI Official Synonym Full Names	dicarbonyl/L-xylulose reductase
NCBI Official Symbol	DCXR
NCBI Official Synonym Symbols	XR; DCR; HCR2; P34H; HCRII; KIDCR; PNTSU; SDR20C1
UniProt Protein Name	L-xylulose reductase
UniProt Synonym Protein Names	Carbonyl reductase II; Dicarbonyl/L-xylulose reductase; Kidney dicarbonyl reductase; kiDCR; Sperm surface protein P34H
UniProt Gene Name	DCXR
UniProt Synonym Gene Names	XR; kiDCR
UniProt Entry Name	DCXR_HUMAN
NCBI Protein Information	L-xylulose reductase; carbonyl reductase 2; carbonyl reductase II; sperm surface protein P34H; kidney dicarbonyl reductase; short chain dehydrogenase/reductase family 20C, member 1
NCBI Summary for DCXR	The protein encoded by this gene acts as a homotetramer to catalyze diacetyl reductase and L-xylulose reductase reactions. The encoded protein may play a role in the uronate cycle of glucose metabolism and in the cellular osmoregulation in the proximal renal tubules. Defects in this gene are a cause of pentosuria. Two transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Aug 2010]

UniProt Comments for DCXR	DCXR: Catalyzes the NADPH-dependent reduction of several pentoses, tetroses, trioses, alpha-dicarbonyl compounds and L- xylulose. Participates in the uronate cycle of glucose metabolism. May play a role in the water absorption and cellular osmoregulation in the proximal renal tubules by producing xylitol, an osmolyte, thereby preventing osmolytic stress from occurring in the renal tubules. The enzyme defect in pentosuria has been shown to involve L-xylulose reductase. Essential pentosuria is an inborn error of metabolism characterized by the excessive urinary excretion of the pentose L-xylulose. Belongs to the short-chain dehydrogenases/reductases (SDR) family. Protein type: Carbohydrate Metabolism - pentose and glucuronate interconversions; Oxidoreductase; EC 1.1.1.10 Chromosomal Location of Human Ortholog: 17q25.3 Cellular Component: microvillus; membrane; cytoplasmic microtubule; nucleus; brush border Molecular Function: oxidoreductase activity, acting on NADH or NADPH, quinone or similar compound as acceptor; L-xylulose reductase activity Biological Process: glucose metabolic process; xylulose metabolic process; D-xylose metabolic process; NADP metabolic process; protein homotetramerization Disease: Pentosuria
Research Articles on DCXR	**1.** EGCG is a potential inhibitor to human DCXR.
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