
Product Data Sheet

Product Name: DCXR Human, Bioactive

Cat. No.: GP21547

Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	DCR; HCR2; HCR11; KIDCR; P34H; SDR20C1; Dicarbonyl/L-Xylulose Reductase; EC=1.1.1.10; Carbonyl reductase II; Kidney dicarbonyl reductase; Sperm surface protein P34H.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MELFLAGRRV LVTGAGKGIG RGTVQALHAT GARVAVSRT QADLDSLVR CPGIEPVCVD LGDWEATERA LGSVGPVDLL VNNAAVALLQ PFLEVTKEAF DRSFEVNLRA VIQVSQIVAR GLIARGVPGA IVNVSSQCSQ RAVTNHSVYC STKGALDMLT KVMALELGPH KIRVNAVNP VVMTSMGQAT WSDPHKAKTM LNRIPLGKFA EVEHVVNAIL FLLSDRSGMT TGSTLPVEGG FWAC.		
Formulation	The DCXR (0.5mg/ml) solution containing 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 20% glycerol and 50mM NaCl.		

Introduction

DCXR catalyzes the NADPH-dependent reduction of numerous pentoses, tetroses, trioses, alpha-dicarbonyl molecules and L-xylulose. DCXR takes part in the uronate cycle of glucose metabolism. DCXR participates in the water absorption and cellular osmoregulation in the proximal renal tubules by producing xylitol, an osmolyte, thus preventing osmolytic stress from occurring in the renal tubules.

Biological Activity

Specific activity is > 1,800 pmol/min/ug and is defined as the amount of enzyme that oxidize 1pmole of xylitol to L-xylulose per minute at pH 10.0 at 37C.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

DCXR Recombinant Human produced in E.Coli is a single, non-glycosylated polypeptide chain containing 264 amino acids (1-244 a.a.) and having a molecular mass of 28 kDa. The DCXR is fused to a 20 amino acids His-Tag at N-terminus and purified by proprietary chromatographic techniques.

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