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# Recombinant human DCXR protein

Catalog Number: ATGP3527

#### PRODUCT INFORMATION

# **Expression system**

E.coli

#### **Domain**

1-244aa

#### **UniProt No.**

07Z4W1

#### **NCBI Accession No.**

NP 057370

### **Alternative Names**

Carbonyl reductase II, DCR, Dicarbonyl/L-xylulose reductase, HCR 2, HCR II, KIDCR, Kidney dicarbonyl reductase, L-xylulose reductase, P34H, Sperm surface protein P34H, XR

## **PRODUCT SPECIFICATION**

# **Molecular Weight**

28 kDa (264aa) confirmed by MALDI-TOF

## Concentration

0.5mg/ml (determined by Bradford assay)

#### **Formulation**

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 20% glycerol, 50mM NaCl

#### **Purity**

> 95% by SDS-PAGE

## **Biological Activity**

Specific activity is > 1,800pmol/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.

#### Tag

His-Tag

# **Application**

SDS-PAGE, Enzyme Activity

#### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

# **BACKGROUND**

# **Description**

Dicarbonyl/L-xylulose reductase, also known as DCXR, is an enzyme responsible for the metabolism of xylulose, converting it into xylitol. DCXR was expressed at low levels and was localized predominantly in the cytoplasmic



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membrane. In contrast, in virtually all grades of early-stage prostate cancer and in all chemohormonally treated cases, DCXR was strikingly overexpressed and was localized predominantly in the cytoplasm and nucleus. Recombinant human DCXR, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

# **Amino acid Sequence**

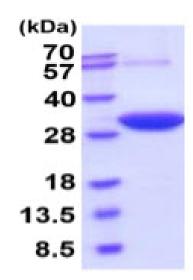
MGSSHHHHHH SSGLVPRGSH MELFLAGRRV LVTGAGKGIG RGTVQALHAT GARVVAVSRT QADLDSLVRE CPGIEPVCVD LGDWEATERA LGSVGPVDLL VNNAAVALLQ PFLEVTKEAF DRSFEVNLRA VIQVSQIVAR GLIARGVPGA IVNVSSQCSQ RAVTNHSVYC STKGALDMLT KVMALELGPH KIRVNAVNPT VVMTSMGQAT WSDPHKAKTM LNRIPLGKFA EVEHVVNAIL FI I SDRSGMT TGSTI PVFGG FWAC.

#### **General References**

Cho Veqa JH., et al. (2007) Cancer Epidemiol Biomakers Prev. 16(12):2615-22. Nakaqawa J., et al. (2002) J Biol Chem. 277(20):17883-91.

# **DATA**

#### **SDS-PAGE**



15% SDS-PAGE (3ug)

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

