

Human DCXR / HCR2 Protein (His Tag)

Catalog Number: 14562-H07E



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

DCR; HCR2; HCR2I; KIDCR; P34H; PNTSU; SDR20C1; XR; 0610038K04Rik; 1810027P18Rik

Protein Construction:

A DNA sequence encoding the mature form of human DCXR (Q7Z4W1) (Met1-Cys244) was expressed with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His

Molecular Mass:

The recombinant human DCXR consists of 259 amino acids and predicts a molecular mass of 27.8 KDa. It migrates as an approximately 29 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, 20% Glycerol, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

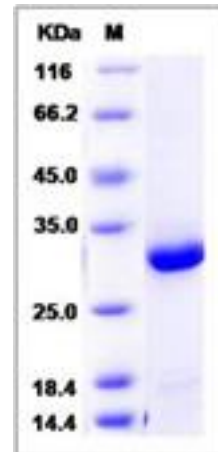
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

DCXR, also known as HCR2, belongs to the short-chain dehydrogenases/reductases (SDR) family. It is highly expressed in kidney, liver and epididymis. In the epididymis, DCXR is mainly expressed in the proximal and distal sections of the corpus region. HCR2 is weakly or not expressed in brain, lung, heart, spleen and testis. DCXR catalyzes the NADPH-dependent reduction of several pentoses, tetroses, trioses, alpha-dicarbonyl compounds and L-xylulose. DCXR participates in the uronate cycle of glucose metabolism. It 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.

References

1. Kim W, *et al.* (2011) Systematic and quantitative assessment of the ubiquitin-modified proteome. *Mol Cell.* 44(2):325-40.
2. Pierce SB, *et al.* (2011) Garrod's fourth inborn error of metabolism solved by the identification of mutations causing pentosuria. *Proc Natl Acad Sci.* 108(45):18313-7.
3. Udeshi ND, *et al.* (2012) Methods for quantification of in vivo changes in protein ubiquitination following proteasome and deubiquitinase inhibition. *Mol Cell Proteomics.* 11(5):148-59.

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