Data Sheet (Cat.No.TMPY-03460)

TargetMol

DCXR Protein, Human, Recombinant (His)

General Information

Synonyms:	XR;P34H;HCR2;HCRII;PNTSU;SDR20C1;DCR;dicarbonyl/L-xylulose reductase;KIDCR
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. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	Q7Z4W1
Molecular Weight:	27.8 kDa (predicted); 29 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Supplied as sterile PBS, 20% Glycerol, pH 7.4.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

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.

Reference

Kim W,et al. (2011) Systematic and quantitative assessment of the ubiquitin-modified proteome. Mol Cell. 44(2): 325-40.

Zaheer S,et al. (2011) Augmented expression of glia maturation factor in Alzheimer's disease. Neuroscience. 194: 227-33.

Danielsen JM,et al. (2011) Mass spectrometric analysis of lysine ubiquitylation reveals promiscuity at site level. Mol Cell Proteomics. 10(3):M110.003590.

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