

## **DCXR Polyclonal Antibody**

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP55461

### **Specification**

## **DCXR Polyclonal Antibody - Product Information**

Application IHC-P, IHC-F, IF, ICC, E

Primary Accession
Reactivity
Rat
Host
Clonality
Calculated MW

O7Z4W1
Rat
Rabbit
Polyclonal
26 KDa

Physical State
Liquid
Immunogen
KLH conjugated synthetic peptide derived

laG

from human DCXR

Epitope Specificity 101-200/244

Isotype Purity

Buffer 0.01M TBS (pH7.4) with 1% BSA, 0.02%

SUBCELLULAR LOCATION Proclin300 and 50% Glycerol.

Membrane. Probably recruited to

membranes via an interaction with phosphatidylinositol.

SIMILARITY Belongs to the short-chain

dehydrogenases/reductases (SDR) family.

DISEASE

Note=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.

Important Note This product as supplied is intended for

research use only, not for use in human, therapeutic or diagnostic applications.

## **Background Descriptions**

affinity purified by Protein A

DCXR is a 244 amino acid member of the short-chain dehydrogenases/reductases family. This peripheral membrane protein catalyzes NADPH-dependent reduction of mulitple sugars, including L-xylulose, to the osmolyte xylitol. Producing xylitol in the renal tubules can prevent osmotic stress. L-xylulose reductase functions as a homotetramer and is expressed highly in kidney, liver and epididymis. Essential pentosuria is the result of a partial deficiency of L-xylulose reductase. Red blood cells of normal individuals contain two L-xylulose reductases: a major and a minor isozyme. Red cells from patients with pentosuria contain only one isozyme. Due to its role in the uronate cycle of glucose metabolism, L-xylulose reductase has been implicated in the management of the long term complications of diabetes.

## **DCXR Polyclonal Antibody - Additional Information**



#### **Gene ID** 51181

#### **Other Names**

L-xylulose reductase, XR, 1.1.1.10, Carbonyl reductase II, Dicarbonyl/L-xylulose reductase, Kidney dicarbonyl reductase, kiDCR, Short chain dehydrogenase/reductase family 20C member 1, Sperm surface protein P34H, DCXR, SDR20C1

## **Target/Specificity**

Highly expressed in kidney, liver and epididymis. In the epididymis, it is mainly expressed in the proximal and distal sections of the corpus region. Weakly or not expressed in brain, lung, heart, spleen and testis.

#### Dilution

<span class ="dilution\_IHC-P">IHC-P~~N/A</span><br \> <span class
="dilution\_IHC-F">IHC-F~~N/A</span><br \> <span class
="dilution\_IF">IF~~1:50~200</span><br \> <span class ="dilution\_ICC">ICC~~N/A</span><br \> <span class ="dilution\_E">E~~N/A</span>

#### **Format**

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

#### Storage

Store at -20  $^{\circ}$ C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4  $^{\circ}$ C.

### **DCXR Polyclonal Antibody - Protein Information**

### **Name DCXR**

## Synonyms SDR20C1

### **Function**

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.

### **Cellular Location**

Membrane; Peripheral membrane protein. Note=Probably recruited to membranes via an interaction with phosphatidylinositol.

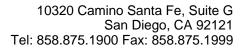
# **Tissue Location**

Highly expressed in kidney, liver and epididymis. In the epididymis, it is mainly expressed in the proximal and distal sections of the corpus region. Weakly or not expressed in brain, lung, heart, spleen and testis.

# **DCXR Polyclonal Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides





• Dot Blot

- <u>Immunohistochemistry</u>
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

**DCXR Polyclonal Antibody - Images**