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[Primary Antibody]

Rabbit Anti-DCXR antibody

Catalog Number: SL14209R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	DCXR
Immunogen:	KLH conjugated synthetic peptide derived from human DCXR: 101-200/244
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 ICC/IF=1:100-500 IF=1:100-500 ELISA=1:5000-10000 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	(predicted: Human, Mouse, Rat)
Predicted MW.:	26kDa
Subcellular Location:	The cell membrane
Background:	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

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	complications of diabetes. **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. **Subcellular Location:** Membrane. Probably recruited to membranes via an interaction with phosphatidylinositol. **Tissue 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. 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. **Similarity:** Belongs to the short-chain dehydrogenases/reductases (SDR) family. **Database links:** **Entrez Gene:** 51181 Human **Entrez Gene:** 526937 Cow **Entrez Gene:** 67880 Mouse **Entrez Gene:** 171408 Rat Omim: 608347 Human **SwissProt:** Q1JP75 Cow **SwissProt:** Q7Z4W1 Human **SwissProt:** Q91X52 Mouse **SwissProt:** Q920P0 Rat **Unigene:** 9857 Human **Unigene:** 231091 Mouse **Unigene:** 177518 Rat

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