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DCXR Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55461

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q7Z4W1
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	25913
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DCXR
Epitope Specificity	101-200/244
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	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	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.

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	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °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 °C.

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.