

**Goat Anti-Dicarbonyl Reductase Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF1318a****Specification**

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**Goat Anti-Dicarbonyl Reductase Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">O7Z4W1</a>
Other Accession	<a href="#">NP_057370</a> , <a href="#">51181</a>
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	25913

**Goat Anti-Dicarbonyl Reductase 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

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-Dicarbonyl Reductase Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-Dicarbonyl Reductase 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.

### Goat Anti-Dicarbonyl Reductase Antibody - Protocols

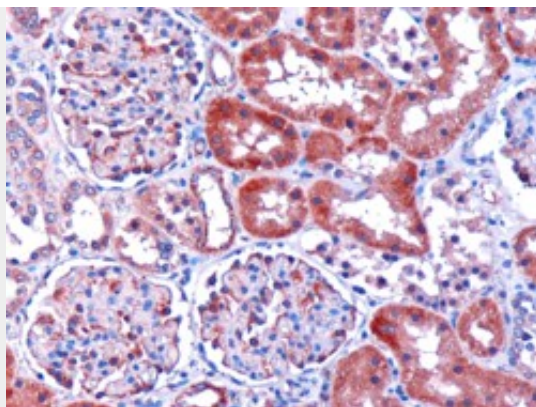
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Goat Anti-Dicarbonyl Reductase Antibody - Images



AF1318a staining (0.1  $\mu$ g/ml) of human kidney lysate (RIPA buffer, 35  $\mu$ g total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence.



AF1318a (1 µg/ml) staining of paraffin embedded human kidney. Microwaved antigen retrieval with citrate buffer pH 6, HRP-staining.

### **Goat Anti-Dicarbonyl Reductase Antibody - Background**

The protein encoded by this gene acts as a homotetramer to catalyze diacetyl reductase and L-xylulose reductase reactions. The encoded protein may play a role in the uronate cycle of glucose metabolism and in the cellular osmoregulation in the proximal renal tubules. Defects in this gene are a cause of pentosuria. Two transcript variants encoding different isoforms have been found for this gene.

### **Goat Anti-Dicarbonyl Reductase Antibody - References**

Defining the human deubiquitinating enzyme interaction landscape. Sowa ME, et al. Cell, 2009 Jul 23. PMID 19615732.

Structure/function analysis of a critical disulfide bond in the active site of L-xylulose reductase. Zhao HT, et al. Cell Mol Life Sci, 2009 May. PMID 19337691.

The SDR (short-chain dehydrogenase/reductase and related enzymes) nomenclature initiative. Persson B, et al. Chem Biol Interact, 2009 Mar 16. PMID 19027726.

Dicarbonyl/L-xylulose reductase: a potential biomarker identified by laser-capture microdissection-micro serial analysis of gene expression of human prostate adenocarcinoma.

Cho-Vega JH, et al. Cancer Epidemiol Biomarkers Prev, 2007 Dec. PMID 18086765.

Suppression of renal alpha-dicarbonyl compounds generated following ureteral obstruction by kidney-specific alpha-dicarbonyl/L-xylulose reductase. Odani H, et al. Ann N Y Acad Sci, 2008 Apr. PMID 18079483.