

Uniprot ID: [Q04828](#)

Protein name: AK1C1_HUMAN

AKR1C1-2

Full name: Aldo-keto reductase family 1 member C1

Protein existence: evidence at protein level

Function: Converts progesterone to its inactive form, 20-alpha-dihydroxyprogesterone (20-alpha-OHP). In the liver and intestine, may have a role in the transport of bile. May have a role in monitoring the intrahepatic bile acid concentration. Has a low bile-binding ability. May play a role in myelin formation.

Subcellular location: Cytoplasm.

Tissue specificity: Expressed in all tissues tested including liver, prostate, testis, adrenal gland, brain, uterus, mammary gland and keratinocytes. Highest levels found in liver, mammary gland and brain

Two antibodies: AKR1C1-1 and AKR1C1-2. Both were approved for IHC AKR1C1-2 was selected for full protein profiling.

AKR1C1-2 (CAB047303)

OK

Immunohistochemistry

IHC protocol: HIER pH 6, Dilution 1:700

IHC test staining: Strong staining in some tissues, including liver, both normal and cancer, intestine, pancreas and kidney.

IHC Annotators comments

Moderate to strong cytoplasmic staining with occasional nuclear positivity was observed in respiratory epithelia, gastrointestinal tract, fallopian tube, liver, urinary bladder, hematopoietic cells, most mesenchymal cells, Leydig cells, renal tubules and exocrine pancreas. Most remaining normal tissues were weakly stained or negative.

Immunofluorescence

IF Overlay: antibody (green), anti-tubuline (red) and DAPI (blue)

IF Localization: Staining of cytoplasm in Hep-G2

IF Validation: The subcellular location is supported by literature.

Western blot

WB Size markers (kDa): 250, 130, 95, 72, 55, 36, 28, 17, 11

WB Lanes: Marker(1), RT-4(2), U251 MG(3), Plasma(4), Liver(5), Tonsil(6)

WB Target weight (kDa): 37, 37, 23, 28

WB Validation: Supportive (Band of predicted size in kDa (+/-20%) with additional bands present)

