

Rabbit AKR1A1 Polyclonal Antibody | anti-AKR1A1 antibody

AKR1A1 Antibody (C-term)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA283606	Rabbit	Human (Predicted Reactivity: Bovine, Mouse, Pig, Rat)	Western Blot, Immunohistochemistry, ELISA

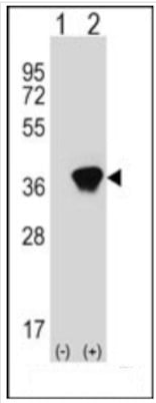
PRODUCT SYNONYMS

AKR1A1; Polyclonal Antibody; AKR1A1 Antibody (C-term); Alcohol dehydrogenase [NADP(+)]; Aldehyde reductase; Aldo-keto reductase family 1 member A1; ALDR1; ALR; anti-AKR1A1 antibody

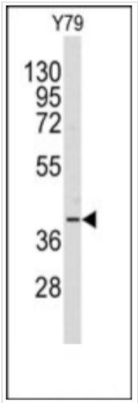
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human (Predicted Reactivity: Bovine, Mouse, Pig, Rat)
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This AKR1A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 293-325 amino acids from the C-terminal region of human AKR1A1.
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Sequence Positions	293-325
Sequence Length	325
Applicable Applications for anti-AKR1A1 antibody	WB (Western Blot), IHC (Immunohistochemistry), ELISA
Function	Catalyzes the NADPH-dependent reduction of a wide variety of carbonyl-containing compounds to their corresponding alcohols. Displays enzymatic activity towards endogenous metabolites such as aromatic and aliphatic aldehydes, ketones, monosaccharides and bile acids, with a preference for negatively charged substrates, such as glucuronate and succinic semialdehyde (PubMed:10510318). Functions as a detoxifying enzyme by reducing a range of toxic aldehydes. Reduces methylglyoxal and 3-deoxyglucosone, which are present at elevated levels under hyperglycemic conditions and are cytotoxic. Involved also in the detoxification of lipid-derived aldehydes like acrolein (By similarity). Plays a role in the activation of procarcinogens, such as polycyclic aromatic hydrocarbon trans-dihydrodiols, and in the metabolism of various xenobiotics and drugs, including the anthracyclines doxorubicin (DOX) and daunorubicin (DAUN) (PubMed:18276838, PubMed:11306097). Displays no reductase activity towards retinoids (By similarity).
Cellular Location	Cytoplasm, cytosol {ECO:0000250 UniProtKB:Q9JII6}. Apical cell membrane {ECO:0000250 UniProtKB:Q9JII6}
Tissue Location	Widely expressed. Highly expressed in kidney, salivary gland and liver. Detected in trachea, stomach, brain, lung, prostate, placenta, mammary gland, small intestine and lung
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.

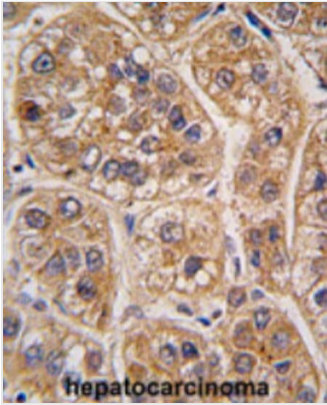
IMAGES



WB (Western Blot)
Western blot analysis of AKR1A1 (arrow) using rabbit polyclonal AKR1A1 Antibody (C-term). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the AKR1A1 gene.



WB (Western Blot)
Western blot analysis of anti-AKR1A1 Antibody (C-term) in Y79 cell line lysates (35ug/lane). AKR1A1(arrow) was detected using the purified Pab.



IHC (Immunohistochemistry)
Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with AKR1A1 antibody (C-term) , which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

ADDITIONAL INFORMATION

Related Product Information for anti-AKR1A1 antibody	AKR1A1 is a member of the aldo/keto reductase superfamily, which consists of more than 40 known enzymes and proteins. This member, also known as aldehyde reductase, is involved in the reduction of biogenic and xenobiotic aldehydes and is present in virtually every tissue.
Product Categories/Family for anti-AKR1A1 antibody	Cell Biology; Metabolism; Signal transduction
References	Steuber,H.,J. Mol. Biol. 379 (5), 991-1016 (2008) Bohren,K.M.,Biochim. Biophys. Acta 1748 (2), 201-212 (2005) El-Kabbani,O.,Acta Crystallogr. D Biol. Crystallogr. 50 (PT 6), 859-868 (1994)

NCBI AND UNIPROT INFORMATION

NCBI GI #	320202988
NCBI GeneID	10327
NCBI Accession #	NP_001189342.1; NP_001189343.1; NP_006057.1; NP_697021.1
NCBI GenBank Nucleotide #	NM_001202413.1
UniProt Accession #	P14550; Q6IAZ4; A8KAL8; D3DQ04

Molecular Weight	36573
NCBI Official Full Name	alcohol dehydrogenase
NCBI Official Synonym Full Names	aldo-keto reductase family 1, member A1 (aldehyde reductase)
NCBI Official Symbol	AKR1A1
NCBI Official Synonym Symbols	ALR; ARM; DD3; ALDR1; HEL-S-6
NCBI Protein Information	alcohol dehydrogenase [NADP(+)]
UniProt Protein Name	Alcohol dehydrogenase [NADP(+)]
UniProt Gene Name	AKR1A1
UniProt Synonym Gene Names	ALDR1; ALR
UniProt Entry Name	AK1A1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/polyclonal/akr1a1-antibody-western-blot-immunohistochemistry-elisa/283606>