

AKR1A1 Antibody (CT)

Rabbit Polyclonal Antibody Catalog # ABV11288

Specification

AKR1A1 Antibody (CT) - Product Information

Application WB, IHC Primary Accession P14550

Reactivity Human, Mouse, Rat, Pig, Bovine

Host Rabbit
Clonality Polyclonal
Isotype Rabbit IgG
Calculated MW 36573

AKR1A1 Antibody (CT) - Additional Information

Gene ID 10327

Positive Control Western blot: Y79, 293 cell line lysates,

IHC: human hepatocarcinoma

Application & Usage Western blot: ~1:1000, IHC: ~1:10 - 1:50

Other Names

AKR1A1; ALDR1; ALR; Alcohol dehydrogenase [NADP(+)]; Aldehyde reductase; Aldo-keto reductase

family 1 member A1

Target/Specificity

AKR1A1

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µl of antibody in PBS with 0.09% (W/V) sodium azide

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

AKR1A1 Antibody (CT) is for research use only and not for use in diagnostic or therapeutic procedures.



AKR1A1 Antibody (CT) - Protein Information

Name AKR1A1

Synonyms ALDR1, ALR

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 detoxifiying 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

AKR1A1 Antibody (CT) - Protocols

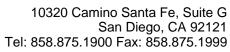
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

AKR1A1 Antibody (CT) - Images

AKR1A1 Antibody (CT) - Background

AKR1A1 (aldo-keto reductase family 1 member A1), also known as ALR (aldehyde reductase), DD3 (dihydrodiol dehydrogenase 3) or ALDR1 (alcohol dehydrogenase), is a widely and abundantly expressed member of the aldo-keto reductase (AKR) family of proteins. Members of the AKR family are soluble NADPH-dependent oxidoreductases. They play important roles in the metabolism of drugs, carcinogens and reactive aldehydes. AKR1A1 exists as a monomer and catalyzes the reduction of xenobiotic and biogenic aldehydes and ketones to their corresponding alcohols. In particular, AKR1A1 efficiently catalyzes medium-chain and aromatic aldehydes. AKR1A1





participates in the biosynthetic pathways of cholesterol and triglyceride and plays a role in the activation of polycyclic aromatic hydrocarbons (PAHs).