

AKR1D1 (A-7): sc-373970

BACKGROUND

AKR1D1 (aldo-keto reductase family 1 member D1), also known as Δ^4 -3-oxosteroid 5- β -reductase (3o5bred) or steroid 5- β -reductase (SRD5B1), is responsible for catalyzing bile acid intermediates and steroid hormones possessing a Δ^4 -3-one structure to 5- β reduced metabolites. The AKR family of proteins are soluble NADPH oxidoreductases. They play important roles in the metabolism of drugs, carcinogens and reactive aldehydes. AKR1D1 is highly ex-pressed in liver, colon and testis. Substrates for AKR1D1 include testosterone, androstenedione, progesterone, 17- α -hydroxyprogesterone and the bile acid intermediates 7- α -hydroxy-4-cholesten-3-one and 7- α , 12- α -dihydroxy-4-cholesten-3-one. A deficiency in AKR1D1 may be involved in hepatic dysfunction.

CHROMOSOMAL LOCATION

Genetic locus: AKR1D1 (human) mapping to 7q33; Akrl1d1 (mouse) mapping to 6 B1.

SOURCE

AKR1D1 (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 13-37 at the N-terminus of AKR1D1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373970 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

AKR1D1 (A-7) is recommended for detection of AKR1D1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AKR1D1 (A-7) is also recommended for detection of AKR1D1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for AKR1D1 siRNA (h): sc-61964, AKR1D1 siRNA (m): sc-61965, AKR1D1 shRNA Plasmid (h): sc-61964-SH, AKR1D1 shRNA Plasmid (m): sc-61965-SH, AKR1D1 shRNA (h) Lentiviral Particles: sc-61964-V and AKR1D1 shRNA (m) Lentiviral Particles: sc-61965-V.

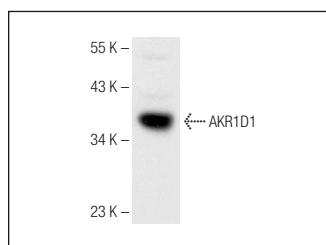
Molecular Weight of AKR1D1: 37 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, mouse liver extract: sc-2256 or rat liver extract: sc-2395.

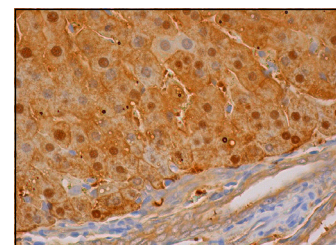
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



AKR1D1 (A-7): sc-373970. Western blot analysis of AKR1D1 expression in Hep G2 whole cell lysate.



AKR1D1 (A-7): sc-373970. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic and nuclear staining of hepatocytes and cytoplasmic staining of bile duct cells.

SELECT PRODUCT CITATIONS

1. Dai, T., et al. 2021. Regulation network and prognostic significance of aldo-keto reductase (AKR) superfamily genes in hepatocellular carcinoma. *J. Hepatocell. Carcinoma* 8: 997-1021.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.