

# AKR1D1 (C-16): sc-67709

## BACKGROUND

AKR1D1 (aldo-keto reductase family 1 member D1), also known as  $\alpha$ (4)-3-oxosteroid 5- $\beta$ -reductase (3o5bred) or steroid 5- $\beta$ -reductase (SRD5B1), is responsible for catalyzing bile acid intermediates and steroid hormones possessing a  $\alpha$ (4)-3-one structure to 5- $\beta$  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 expressed in liver, colon and testis. Substrates for AKR1D1 include testosterone, androstenedione, progesterone, 17- $\alpha$ -hydroxyprogesterone and the bile acid intermediates 7- $\alpha$ -hydroxy-4-cholesten-3-one and 7- $\alpha$ , 12- $\alpha$ -dihydroxy-4-cholesten-3-one. A deficiency in AKR1D1 may be involved in hepatic dysfunction.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: AKR1D1 (human) mapping to 7q33; Akr1d1 (mouse) mapping to 6 B1.

## SOURCE

AKR1D1 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of AKR1D1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-67709 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

AKR1D1 (C-16) is recommended for detection of AKR1D1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (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 (C-16) is also recommended for detection of AKR1D1 in additional species, including equine, canine and avian.

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

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.