

AKR1CL2 (N-14): sc-107389

BACKGROUND

Members of the aldo/keto reductase (AKR) family are soluble NADPH-dependent oxidoreductases that play important roles in the metabolism of drugs, carcinogens and reactive aldehydes and may also act as bile acid-binding proteins. AKR1CL2 (aldo-keto reductase family 1 member C-like protein 2), also known as 1,5-anhydro-D-fructose reductase, AF reductase, LoopADR or HTSP, is a 320 amino acid member of the AKR protein family. Localized to the cytoplasm, AKR1CL2 catalyzes the NADPH-dependent reduction of 1,5-anhydro-D-fructose (AF) to 1,5-anhydro-D-glucitol, as well as the reduction of various quinones and aldehydes. AKR1CL2 is specific to testis and is expressed as five isoforms produced by alternative splicing events.

REFERENCES

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2. Penning, T.M., et al. 2000. Human 3 α -hydroxysteroid dehydrogenase isoforms (AKR1C1-AKR1C4) of the aldo-keto reductase superfamily: functional plasticity and tissue distribution reveals roles in the inactivation and formation of male and female sex hormones. *Biochem. J.* 351: 67-77.
3. Nishinaka, T., et al. 2003. Human testis specific protein: a new member of aldo-keto reductase superfamily. *Chem. Biol. Interact.* 143-144: 299-305.
4. Vergnes, L., et al. 2003. A cluster of eight hydroxysteroid dehydrogenase genes belonging to the aldo-keto reductase supergene family on mouse chromosome 13. *J. Lipid Res.* 44: 503-511.
5. Azuma, Y., et al. 2004. Characterization of htAKR, a novel gene product in the aldo-keto reductase family specifically expressed in human testis. *Mol. Hum. Reprod.* 10: 527-533.
6. Matsumoto, K., et al. 2006. Enzymatic properties of a member (AKR1C20) of the aldo-keto reductase family. *Biol. Pharm. Bull.* 29: 539-542.

CHROMOSOMAL LOCATION

Genetic locus: AKR1E2 (human) mapping to 10p15.1.

SOURCE

AKR1CL2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of AKR1CL2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-107389 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

AKR1CL2 (N-14) is recommended for detection of AKR1CL2 of 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).

Suitable for use as control antibody for AKR1CL2 siRNA (h): sc-90638, AKR1CL2 shRNA Plasmid (h): sc-90638-SH and AKR1CL2 shRNA (h) Lentiviral Particles: sc-90638-V.

Molecular Weight (predicted) of AKR1CL2: 36 kDa.

Molecular Weight (observed) of AKR1CL2: 32 kDa.

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.

RESEARCH USE

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

PROTOCOLS

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