SANTA CRUZ BIOTECHNOLOGY, INC.

SDR39U1 (Y-17): sc-244095

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SDR39U1 (short chain dehydrogenase/reductase family 39U, member 1) is a 319 amino acid protein that belongs to the sugar epimerase family and the SDR39U1 subfamily. The short-chain dehydrogenase/reductase (SDR) superfamily now has over 47,000 members, most of which are distantly related, with typically 20–30% residue identity in pairwise comparisons, making it difficult to obtain an overview of this superfamily. The SDR enzymes are present in virtually all genomes investigated, and in humans over 70 SDR genes have been identified. Despite its name, SDR39U1 shares more sequence similarity with the sugar epimerase family than with the SDR family. The SDR39U1 protein is expressed in adrenal gland. Existing as three alternatively spliced isoforms, the SDR39U1 gene is conserved in canine, bovine, mouse, rat, zebrafish, fruit fly, mosquito, A.thaliana and rice, and maps to human chromosome 14q12. Chromosome 14 contains about 700 genes, 106 million base pairs and makes up about 3.5% of human cellular DNA.

REFERENCES

1. Jörnvall, H., et al. 1995. Short-chain dehydrogenases/reductases (SDR). Biochemistry 34: 6003-6013.
2. Oppermann, U.C., et al. 2001. Forms and functions of human SDR enzymes. Chem. Biol. Interact. 130-132: 699-705.
3. Kallberg, Y., et al. 2002. Short-chain dehydrogenase/reductase (SDR) relationships: a large family with eight clusters common to human, animal, and plant genomes. Protein Sci. 11: 636-641.
4. Oppermann, U., et al. 2003. Short-chain dehydrogenases/reductases (SDR): the 2002 update. Chem. Biol. Interact. 143-144: 247-253.
5. Heilig, R., et al. 2003. The DNA sequence and analysis of human chromosome 14. Nature 421: 601-607.
6. Persson, B., et al. 2009. The SDR (short-chain dehydrogenase/reductase and related enzymes) nomenclature initiative. Chem. Biol. Interact. 178: 94-98.
7. Kallberg, Y., et al. 2010. Classification of the short-chain dehydrogenase/reductase superfamily using hidden Markov models. FEBS J. 277: 2375-2386.

CHROMOSOMAL LOCATION

Genetic locus: SDR39U1 (human) mapping to 14q12; Sdr39u1 (mouse) mapping to 14 C3.

SOURCE

SDR39U1 (Y-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SDR39U1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-244095 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SDR39U1 (Y-17) is recommended for detection of SDR39U1 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).

SDR39U1 (Y-17) is also recommended for detection of SDR39U1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SDR39U1 siRNA (h): sc-92338, SDR39U1 siRNA (m): sc-108665, SDR39U1 shRNA Plasmid (h): sc-92338-SH, SDR39U1 shRNA Plasmid (m): sc-108665-SH, SDR39U1 shRNA (h) Lentiviral Particles: sc-92338-V and SDR39U1 shRNA (m) Lentiviral Particles: sc-108665-V.

Molecular Weight of SDR39U1 1/2/3: 35/31/21 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.

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 or our catalog for detailed protocols and support products.