SANTA CRUZ BIOTECHNOLOGY, INC.

Arylsulfatase D (T-13): sc-131119

BACKGROUND

Arylsulfatase D, also known as ARSD, is a 593 amino acid protein that localizes to the lysosome and belongs to the sulfatase family of bone and cartilage matrix proteins. Existing as three alternatively spliced isoforms which are expressed in liver, pancreas, kidney, heart, brain, lung and placenta, Arylsulfatase D uses calcium as a cofactor to catalyze reactions that are important in maintaining correct bone composition. The gene encoding Arylsulfatase D maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination. There are a number of conditions related to an abnormal number and combination of sex chromosomes, some of which include Turner's syndrome, color blindness, hemophilia and Duchenne muscular dystrophy.

REFERENCES

1. Chant, J. and Stowers, L. 1995. GTPase cascades choreographing cellular behavior: movement, morphogenesis, and more. Cell 81: 1-4.
2. Meroni, G., Franco, B., Archidiacono, N., Messali, S., Andolfi, G., Rocchi, M. and Ballabio, A. 1996. Characterization of a cluster of sulfatase genes on Xp22.3 suggests gene duplications in an ancestral pseudoautosomal region. Hum. Mol. Genet. 5: 423-431.
3. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 300002. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Dooley, T.P., Haldeman-Cahill, R., Joiner, J. and Wilborn, T.W. 2000. Expression profiling of human sulfotransferase and sulfatase gene superfamilies in epithelial tissues and cultured cells. Biochem. Biophys. Res. Commun. 277: 236-245.
5. Urbitsch, P., Salzer, M.J., Hirschmann, P. and Vogt, P.H. 2000. Arylsulfatase D gene in Xp22.3 encodes two protein isoforms. DNA Cell Biol. 19: 765-773.
6. Lin, Y.F., Yang, J. and Rosen, B.P. 2007. ArsD residues Cys12, Cys13, and Cys18 form an As(III)-binding site required for arsenic metallochaperone activity. J. Biol. Chem. 282: 16783-16791.

CHROMOSOMAL LOCATION

Genetic locus: ARSD (human) mapping to Xp22.33.

SOURCE

Arylsulfatase D (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Arylsulfatase D of human origin.

STORAGE

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

PROTOCOLS

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

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-131119 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Arylsulfatase D (T-13) is recommended for detection of Arylsulfatase D isoforms 1, 2 and 3 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); non cross-reactive with other Arylsulfatase family members.

Suitable for use as control antibody for Arylsulfatase D siRNA (h): sc-91301, Arylsulfatase D shRNA Plasmid (h): sc-91301-SH and Arylsulfatase D shRNA (h) Lentiviral Particles: sc-91301-V.

Molecular Weight of Arylsulfatase D: 65 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.

SELECT PRODUCT CITATIONS

1. Trojani, A., Di Camillo, B., Tedeschi, A., Lodola, M., Montesano, S., Ricci, F., Vismara, E., Greco, A., Veronese, S., Orlacchio, A., Martino, S., Colombo, C., Mura, M., Nichelatti, M., Colosimo, A., Scarpati, B., Montillo, M. and Morra, E. 2011-2012. Gene expression profiling identifies ARSD as a new marker of disease progression and the sphingolipid metabolism as a potential novel metabolism in chronic lymphocytic leukemia. Cancer Biomark. 11: 15-28.

RESEARCH USE

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