

CYS1 (E-14): sc-138911

BACKGROUND

CYS1 (cystin-1), also known as cilia-associated protein or ck, is a 145 amino acid protein localized to cytoplasm and cilium. CYS1 is expressed at highest levels in liver and kidney, with lower levels found in brain, lung and heart. Defects in the gene that encodes CYS1 are a cause of polycystic kidney disease. The gene that encodes CYS1 maps to human chromosome 2. As the second largest human chromosome, chromosome 2 makes up approximately 8% of the human genome and contains 237 million bases encoding over 1,400 genes. A number of genetic diseases are linked to genes on chromosome 2, including Harlequin ichthyosis, sitosterolemia and Alstrom syndrome.

REFERENCES

- Hou, X., Mrug, M., Yoder, B.K., Lefkowitz, E.J., Kremmidiotis, G., D'Eustachio, P., Beier, D.R. and Guay-Woodford, L.M. 2002. Cystin, a novel cilia-associated protein, is disrupted in the cpk mouse model of polycystic kidney disease. *J. Clin. Invest.* 109: 533-540.
- Fliegau, M., Fröhlich, C., Horvath, J., Olbrich, H., Hildebrandt, F. and Omran, H. 2003. Identification of the human CYS1 gene and candidate gene analysis in Boichis disease. *Pediatr. Nephrol.* 18: 498-505.
- Thomas, A.C., Cullup, T., Norgett, E.E., Hill, T., Barton, S., Dale, B.A., Sprecher, E., Sheridan, E., Taylor, A.E., Wilroy, R.S., DeLozier, C., Burrows, N., Goodyear, H., Fleckman, P., Stephens, K.G., Mehta, L., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. *J. Invest. Dermatol.* 126: 2408-2413.
- Akiyama, M., Sakai, K., Sato, T., McMillan, J.R., Goto, M., Sawamura, D. and Shimizu, H. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. *Dermatology* 215: 155-159.
- Marshall, J.D., Hinman, E.G., Collin, G.B., Beck, S., Cerqueira, R., Maffei, P., Milan, G., Zhang, W., Wilson, D.I., Hearn, T., Tavares, P., Vettor, R., Veronese, C., Martin, M., So, W.V., Nishina, P.M. and Naggert, J.K. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. *Hum. Mutat.* 28: 1114-1123.
- Rooryck, C., Souakri, N., Cailley, D., Bouron, J., Goizet, C., Delrue, M.A., Marlin, S., Lacombe, F.D. and Arveiler, B. 2010. Array-CGH analysis of a cohort of 86 patients with oculoauriculovertebral spectrum. *Am. J. Med. Genet. A.* 152: 1984-1989.
- You, Y.H., Song, Y.Y., Meng, F.L., He, L.H., Zhang, M.J., Yan, X.M. and Zhang, J.Z. 2010. Time-series gene expression profiles in AGS cells stimulated with *Helicobacter pylori*. *World J. Gastroenterol.* 16: 1385-1396.

CHROMOSOMAL LOCATION

Genetic locus: Cys1 (mouse) mapping to 12 A1.3.

SOURCE

CYS1 (E-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of CYS1 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138911 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CYS1 (E-14) is recommended for detection of CYS1 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CYS1 siRNA (m): sc-142749, CYS1 shRNA Plasmid (m): sc-142749-SH and CYS1 shRNA (m) Lentiviral Particles: sc-142749-V.

Molecular Weight of CYS1: 16 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotting A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.