SANTA CRUZ BIOTECHNOLOGY, INC.

ANKAR (E-14): sc-167082



BACKGROUND

ANKAR (ankyrin and armadillo repeat containing) is a 1,434 amino acid singlepass membrane protein that contains five ANK repeats, 6 ARM repeats, a eukaryotic RNA recognition motif and a cell surface-to-Golgi transport motif. Conserved in chimpanzee, canine, mouse, rat and zebrafish, ANKAR is ubiquitously expressed, with highest levels in pancreas and lowest in skeletal muscle. ANKAR contains a minimum of thirty-one exons, exists as four alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 2q32.2. 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. Chromosome 2 contains a probable vestigial second centromere as well as vestigial telomeres, which gives credence to the hypothesis that human chromosome 2 formed as a result of an ancient fusion of two ancestral chromosomes, which are still present in modern day apes.

REFERENCES

- Ijdo, J.W., Baldini, A., Ward, D.C., Reeders, S.T. and Wells, R.A. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. Proc. Natl. Acad. Sci. USA 88: 9051-9055.
- Avarello, R., Pedicini, A., Caiulo, A., Zuffardi, O. and Fraccaro, M. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. Hum. Genet. 89: 247-249.
- Hillier, L.W., Graves, T.A., Fulton, R.S., Fulton, L.A., Pepin, K.H., Minx, P., Wagner-McPherson, C., Layman, D., Wylie, K., Sekhon, M., Becker, M.C., Fewell, G.A., Delehaunty, K.D., Miner, T.L., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
- 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 ich-thyosis 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.
- 6. Marshall, J.D., Beck, S., Maffei, P. and Naggert, J.K. 2007. Alström syndrome. Eur. J. Hum. Genet. 15: 1193-1202.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: ANKAR (human) mapping to 2q32.2; Ankar (mouse) mapping to 1 C3.

RESEARCH USE

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

SOURCE

ANKAR (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ANKAR of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-167082 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ANKAR (E-14) is recommended for detection of ANKAR 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).

ANKAR (E-14) is also recommended for detection of ANKAR in additional species, including equine, canine and porcine.

Suitable for use as control antibody for ANKAR siRNA (h): sc-94582, ANKAR siRNA (m): sc-141064, ANKAR shRNA Plasmid (h): sc-94582-SH, ANKAR shRNA Plasmid (m): sc-141064-SH, ANKAR shRNA (h) Lentiviral Particles: sc-94582-V and ANKAR shRNA (m) Lentiviral Particles: sc-141064-V.

Molecular Weight of ANKAR: 162 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) Immunofluo-rescence: 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.

PROTOCOLS

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