

TMCO7 (E-14): sc-165720

BACKGROUND

Chromosome 16 encodes over 900 genes in approximately 90 million base pairs, makes up nearly 3% of human cellular DNA and is associated with a variety of genetic disorders. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, though through the CREBBP gene which encodes a critical CREB binding protein. Signs of Rubinstein-Taybi include mental retardation and predisposition to tumor growth and white blood cell neoplasias. Crohn's disease is a gastrointestinal inflammatory condition associated with chromosome 16 through the NOD2 gene. An association with systemic lupus erythematosus and a number of other autoimmune disorders with the pericentromeric region of chromosome 16 has led to the identification of SLC5A11 as a potential autoimmune modifier. The TMCO7 gene product has been provisionally designated TMCO7 pending further characterization.

REFERENCES

- Ben Hamida, C., Cavalier, L., Belal, S., Sanhaji, H., Nadal, N., Barhoumi, C., M'Rissa, N., Marzouki, N., Mandel, J.L., Ben Hamida, M., Koenig, M. and Hentati, F. 1997. Homozygosity mapping of giant axonal neuropathy gene to chromosome 16q24.1. *Neurogenetics* 1: 129-133.
- Karlsson, J., Zhao, X., Lonskaya, I., Neptin, M., Holmdahl, R. and Andersson, A. 2003. Novel quantitative trait loci controlling development of experimental autoimmune encephalomyelitis and proportion of lymphocyte subpopulations. *J. Immunol.* 170: 1019-1026.
- Forabosco, P., Gorman, J.D., Cleveland, C., Kelly, J.A., Fisher, S.A., Ortmann, W.A., Johansson, C., Johanneson, B., Moser, K.L., Gaffney, P.M., Tsao, B.P., Cantor, R.M., Alarcón-Riquelme, M.E., Behrens, T.W., Harley, J.B., Lewis, C.M. and Criswell, L.A. 2006. Meta-analysis of genome-wide linkage studies of systemic lupus erythematosus. *Genes Immun.* 7: 609-614.
- Carneiro, L.A., Travassos, L.H. and Girardin, S.E. 2007. Nod-like receptors in innate immunity and inflammatory diseases. *Ann. Med.* 39: 581-593.
- Gervasini, C., Castronovo, P., Bentivegna, A., Mottadelli, F., Faravelli, F., Giovannucci-Uzielli, M.L., Pessagno, A., Lucci-Cordisco, E., Pinto, A.M., Salviati, L., Selicorni, A., Tenconi, R., Neri, G. and Larizza, L. 2007. High frequency of mosaic CREBBP deletions in Rubinstein-Taybi syndrome patients and mapping of somatic and germ-line breakpoints. *Genomics* 90: 567-573.
- King, K., Bagnall, R., Fisher, S.A., Sheikh, F., Cuthbert, A., Tan, S., Mundy, N.I., Rosenstiel, P., Schreiber, S., Mathew, C.G. and Roberts, R.G. 2007. Identification, evolution, and association study of a novel promoter and first exon of the human NOD2 (CARD15) gene. *Genomics* 90: 493-501.
- Koop, O., Schirmacher, A., Nelis, E., Timmerman, V., De Jonghe, P., Ringelstein, B., Rasic, V.M., Evrard, P., Gärtner, J., Claeys, K.G., Appenzeller, S., Rautenstrauss, B., Hühne, K., Ramos-Arroyo, M.A., Wörle, H., et al. 2007. Genotype-phenotype analysis in patients with giant axonal neuropathy (GAN). *Neuromuscul. Disord.* 17: 624-630.
- Tattoli, I., Travassos, L.H., Carneiro, L.A., Magalhaes, J.G. and Girardin, S.E. 2007. The nodosome: NOD1 and NOD2 control bacterial infections and inflammation. *Semin. Immunopathol.* 29: 289-301.

CHROMOSOMAL LOCATION

Genetic locus: TMCO7 (human) mapping to 16q22.1; Tmco7 (mouse) mapping to 8 D3.

SOURCE

TMCO7 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TMCO7 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-165720 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMCO7 (E-14) is recommended for detection of TMCO7 of mouse 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); non cross-reactive with other TMCO family members.

Suitable for use as control antibody for TMCO7 siRNA (h): sc-93150, TMCO7 siRNA (m): sc-154330, TMCO7 shRNA Plasmid (h): sc-93150-SH, TMCO7 shRNA Plasmid (m): sc-154330-SH, TMCO7 shRNA (h) Lentiviral Particles: sc-93150-V and TMCO7 shRNA (m) Lentiviral Particles: sc-154330-V.

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.