SANTA CRUZ BIOTECHNOLOGY, INC.

ANO5 (K-13): sc-169626

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ANO5 (anoctamin 5), also known as GDD1 (Gnathodiaphyseal dysplasia 1 protein) or TMEM16E (transmembrane protein 16E), is a 913 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum and cell membrane. Expressed at high levels in kidney, brain, heart, skeletal muscle and lung, with weaker expression in spleen, thymus, placenta, fetal liver and periodontal ligament cells, ANO5 is thought to play a role in embryonic development, specifically in the development of the musculoskeletal system. Defects in the gene encoding ANO5 are the cause of gnathodiaphyseal dysplasia (GDD), Limb-girbdle muscular dystrophy 2L (LGMD2L) and Miyoshi muscular dystrophy 3 (MMD3). GDD, also known as osteogenesis imperfecta with unusual skeletal lesions or gnathodiaphyseal sclerosis, is a rare skeletal disorder characterized by frequent bone fractures, jaw infection and sclerosis of tubular bones. LGMD2L is an autosomal recessive disease that causes weakness and degeneration of the muscles in the legs and arms. MMD3 is a muscular disease that appears during early to mid-adulthood and is characterized by weakness of the lower limbs.

REFERENCES

1. Akasaka, Y., Nakajima, T., Koyama, K., Furuya, K. and Mitsuka, Y. 1969. Familial cases of a new systemic bone disease, hereditary gnathodiaphyseal sclerosis. Nippon Seikeigeka Gakkai Zasshi 43: 381-394.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608662. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Tsutsumi, S., Kamata, N., Vokes, T.J., Maruoka, Y., Nakakuki, K., Enomoto, S., Omura, K., Amagasa, T., Nagayama, M., Saito-Ohara, F., Inazawa, J., Moritani, M., Yamaoka, T., Inoue, H. and Itakura, M. 2004. The novel gene encoding a putative transmembrane protein is mutated in gnathodiaphyseal dysplasia (GDD). Am. J. Hum. Genet. 74: 1255-1261.
4. Katoh, M. and Katoh, M. 2004. GDD1 is identical to TMEM16E, a member of the TMEM16 family. Am. J. Hum. Genet. 75: 927-928; author reply 928-929.
5. Katoh, M. and Katoh, M. 2004. Identification and characterization of TMEM16E and TMEM16F genes in silico. Int. J. Oncol. 24: 1345-1349.

CHROMOSOMAL LOCATION

Genetic locus: ANO5 (human) mapping to 11p14.3; Ano5 (mouse) mapping to 7 B5.

SOURCE

ANO5 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of ANO5 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-169626 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ANO5 (K-13) is recommended for detection of ANO5 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); non cross-reactive with other ANO family members.

Suitable for use as control antibody for ANO5 siRNA (h): sc-97047, ANO5 siRNA (m): sc-154403, ANO5 shRNA Plasmid (h): sc-97047-SH, ANO5 shRNA Plasmid (m): sc-154403-SH, ANO5 shRNA (h) Lentiviral Particles: sc-97047-V and ANO5 shRNA (m) Lentiviral Particles: sc-154403-V.

Molecular Weight of ANO5: 100 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.