

ANKH (m): 293T Lysate: sc-118402

BACKGROUND

ANKH (progressive ankylosis protein homolog) is a multi-pass transmembrane protein involved in bone mineralization and joint maintenance. ANKH is a ubiquitously expressed protein with high expression levels in the embryonic developing articular cartilage of joints in the elbow, wrist, shoulders and digits. Expression of ANKH is regulated by cytokines and various growth factors. ANKH functions as a transporter, regulating the extracellular transport of inorganic pyrophosphates (PPi). The extracellular level of inorganic pyrophosphates can both inhibit and promote different types of pathologic mineralization. Mutations in ANKH are associated with various human skeletal defects including calcium pyrophosphate deposition disease (CPPD) and craniometaphyseal dysplasia Jackson type (CMDJ).

REFERENCES

1. Costello, J.C. and Ryan, L.M. 2004. Modulation of chondrocyte production of extracellular inorganic pyrophosphate. *Curr. Opin. Rheumatol.* 16: 268-272.
2. Tsui, H.W., et al. 2005. ANKH variants associated with ankylosing spondylitis: gender differences. *Arthritis Res. Ther.* 7: R513-R525.
3. Zaka, R. and Williams, C.J. 2005. Genetics of chondrocalcinosis. *Osteoarthritis Cartil.* 13: 745-750.
4. Malkin, I., et al. 2005. Association of ANKH gene polymorphisms with radiographic hand bone size and geometry in a Chuvasha population. *Bone* 36: 365-373.
5. Coe, B.P., et al. 2005. High-resolution chromosome arm 5p array CGH analysis of small cell lung carcinoma cell lines. *Genes Chromosomes Cancer* 42: 308-313.
6. Zhang, Y., et al. 2005. Association of sporadic chondrocalcinosis with a -4-basepair G-to-A transition in the 5'-untranslated region of ANKH that promotes enhanced expression of ANKH protein and excess generation of extracellular inorganic pyrophosphate. *Arthritis Rheum.* 52: 1110-1117.
7. Gurley, K.A., et al. 2006. Biochemical and genetic analysis of ANK in arthritis and bone disease. *Am. J. Hum. Genet.* 79: 1017-1029.
8. Malkin, I., et al. 2006. Strong association between polymorphisms in ANKH locus and skeletal size traits. *Hum. Genet.* 120: 42-51.
9. Vistoropsky, Y., et al. 2007. Osteoprotegerin plasma levels are strongly associated with polymorphisms in human homologue of the mouse progressive ankylosis (ANKH) gene. *Ann. Hum. Genet.* 71: 302-307.

CHROMOSOMAL LOCATION

Genetic locus: Ank (mouse) mapping to 15 B1.

PRODUCT

ANKH (m): 293T Lysate represents a lysate of mouse ANKH transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

ANKH (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ANKH antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

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