



MYL4 (h): 293T Lysate: sc-114218

BACKGROUND

Myosin is a highly conserved, ubiquitously expressed protein that interacts with Actin to generate the force for cellular movements. Conventional myosins are hexameric proteins consisting of two heavy chain subunits, a pair of non-phosphorylatable light chain subunits and a pair of phosphorylatable light chain subunits. Three general classes of myosin have been cloned: smooth muscle myosins, striated muscle myosins and non-muscle myosins. MYL4 (myosin light chain 4), also known as myosin light chain 1, embryonic muscle/atrial isoform and myosin light chain alkali, GT-1 isoform, is a 197 amino acid protein that is one of the numerous regulatory myosin light chains. Regulatory myosin light chains, also known as MLCs, regulate contraction in smooth muscle and non-muscle cells via phosphorylation by myosin light chain kinase (MLCK). Phosphorylation of regulatory myosin light chains is catalyzed by MLCK in the presence of calcium and calmodulin and it increases the actin-activated myosin ATPase activity, thereby regulating the contractile activity. Myosin light chain is also located in striated skeletal muscle, where its function remains undefined.

REFERENCES

1. Gilbert, F. 1999. Disease genes and chromosomes: disease maps of the human genome. chromosome 16. Genet. Test. 3: 243-254.
2. Martin, J., et al. 2004. The sequence and analysis of duplication-rich human chromosome 16. Nature 432: 988-994.
3. Maris, C., et al. 2005. The RNA recognition motif, a plastic RNA-binding platform to regulate post-transcriptional gene expression. FEBS J. 272: 2118-2131.
4. Cléry, A., et al. 2008. RNA recognition motifs: boring? Not quite. Curr. Opin. Struct. Biol. 18: 290-298.
5. Shaw-Smith, C. 2010. Genetic factors in esophageal atresia, tracheo-esophageal fistula and the VACTERL association: Roles for FOXP1 and the 16q24.1 FOX transcription factor gene cluster, and review of the literature. Eur. J. Med. Genet. 53: 6-13.
6. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 160770. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: MYL4 (human) mapping to 17q21.32.

PRODUCT

MYL4 (h): 293T Lysate represents a lysate of human MYL4 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.

RESEARCH USE

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

APPLICATIONS

MYL4 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive MYL4 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.

PROTOCOLS

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