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Lieferung & Zahlungsart

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

MYL7 siRNA (h): sc-45410

BACKGROUND

Encoded by the MYL7 gene, myosin regulatory light chain 7, also designated Myosin regulatory light chain 2, atrial isoform (MLC-2a), is part of a hexameric complex of two heavy chains and four light chains predominantly expressed in adult atrial muscle. Myosin regulatory light chain 7 binds calcium and has been shown to be a useful molecular marker for cardiac chamber specification. The co-expression of myosin regulatory light chain 7 and myosin light chain 2 (MLC2v) in the outflow tract and atrioventricular canal, together with the single expression in the atrial (MYL7) and ventricular (MYL2) myo-cardium, permits the delineation of their boundaries. At the amino acid level there is 95% homology between the human and mouse myosin regulatory light chain 7 sequences.

REFERENCES

1. Kubalak, S.W., et al. 1994. Chamber specification of atrial MLC2 expression precedes septation during murine cardiogenesis. J. Biol. Chem. 269: 16961-16970.
2. Gruber, P.J., et al. 1998. Downregulation of atrial markers during cardiac chamber morphogenesis is irreversible in murine embryos. Development 125: 4427-4438.
3. Franco, D., et al. 1999. MLC2a and MLC2v identifies the embryonic outflow tract myocardium in the developing rodent heart. Anat. Rec. 254: 135-146.
4. Doevendans, P.A., et al. 2000. The murine atrial MLC2 gene: a member of an evolutionarily conserved family of contractile proteins. Cytogenet. Cell Genet. 90: 248-252.
5. Nishigaki, R., et al. 2002. An extra human chromosome 21 reduces MLC2a expression in chimeric mice and Down syndrome. Biochem. Biophys. Res. Commun. 295: 112-118.

CHROMOSOMAL LOCATION

Genetic locus: MYL7 (human) mapping to 7p13.

PRODUCT

MYL7 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MYL7 shRNA Plasmid (h): sc-45410-SH and MYL7 shRNA (h) Lentiviral Particles: sc-45410-V as alternate gene silencing products.

For independent verification of MYL7 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-45410A, sc-45410B and sc-45410C.

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.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

MYL7 siRNA (h) is recommended for the inhibition of MYL7 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 60 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

MYL7 (B-10): sc-365255 is recommended as a control antibody for monitoring of MYL7 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MYL7 gene expression knockdown using RT-PCR Primer: MYL7 (h)-PR: sc-45410-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.