SANTA CRUZ BIOTECHNOLOGY, INC.

LAGE-3 siRNA (m): sc-146637

BACKGROUND

LAGE-3 (L antigen family member 3), also known as DXS9879E, ESO3 or ITBA2, is a 143 amino acid protein belonging to the CTAG family. Members of the LAGE/ESO gene family are clustered together on human chromosome Xq28 and have similar exon-intron structures. Unlike the other family members, which are normally expressed only in testis and activated in a wide range of human tumors, LAGE-3 is ubiquitously expressed in somatic tissues. LAGE-3 is also highly conserved in mouse and rat, suggesting that the encoded protein is functionally important. The gene encoding LAGE-3 maps to mouse chromosome X A7.3. An intronless pseudogene with high sequence similarity to this gene is located on human chromosome 9.

REFERENCES

1. Faranda, S., et al. 1996. Characterization and fine localization of two new genes in Xq28 using the genomic sequence/EST database screening approach. Genomics 34: 323-327.
2. Chen, Y.T., et al. 1997. Genomic cloning and localization of CTAG, a gene encoding an autoimmunogenic cancer-testis antigen NY-ESO-1, to human chromosome Xq28. Cytogenet. Cell Genet. 79: 237-240.
3. Lethe, B., et al. 1998. LAGE-1, a new gene with tumor specificity. Int. J. Cancer 76: 903-908.
4. Aarnoudse, C.A., et al. 1999. Interleukin-2-induced, melanoma-specific T cells recognize CAMEL, an unexpected translation product of LAGE-1. Int. J. Cancer 82: 442-448.
5. Aradhya, S., et al. 2001. Multiple pathogenic and benign genomic rearrangements occur at a 35 kb duplication involving the NEMO and LAGE-2 genes. Hum. Mol. Genet. 10: 2557-2567.
6. Alpen, B., et al. 2002. A new member of the NY-ESO-1 gene family is ubiquitously expressed in somatic tissues and evolutionarily conserved. Gene 297: 141-149.
7. Ratnamala, U., et al. 2011. Refinement of the X-linked nonsyndromic high-grade myopia locus (MYP1) on Xq28 and exclusion of thirteen known positional candidate genes by direct sequencing. Invest. Ophthalmol. Vis. Sci. 52: 6814-6819.

CHROMOSOMAL LOCATION

Genetic locus: Lage3 (mouse) mapping to X A7.3.

PRODUCT

LAGE-3 siRNA (m) is a target-specific 19-25 nt siRNA 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 LAGE-3 shRNA Plasmid (m): sc-146637-SH and LAGE-3 shRNA (m) Lentiviral Particles: sc-146637-V as alternate gene silencing products.

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

LAGE-3 siRNA (m) is recommended for the inhibition of LAGE-3 expression in mouse 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 66 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

LAGE-3 (E-2): sc-515776 is recommended as a control antibody for monitoring of LAGE-3 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 LAGE-3 gene expression knockdown using RT-PCR Primer: LAGE-3 (m)-PR: sc-146637-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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