SANTA CRUZ BIOTECHNOLOGY, INC.

H2-M3 siRNA (m): sc-145862

BACKGROUND

Major histocompatibility complex (MHC) and human leukocyte antigen (HLA) molecules are cell-surface receptors that bind foreign peptides and present them to T lymphocytes. MHC class I molecules consist of two polypeptide chains and a non-covalently associated protein, β-2-microglobulin. Cytotoxic T lymphocytes bind antigenic peptides presented by MHC class I molecules. Antigens that bind to MHC class I molecules are typically 8-10 residues in length and are stabilized in a peptide binding groove. H2-M3 (histocompatibility 2, M region locus 3), also known as Hmt, M3a, H-2M3 or R4B2, is a 336 amino acid murine protein that belongs to the MHC class I family and is a homolog of human HLA-G (major histocompatibility complex, class I, G). Thought to induce dendritic cell maturation and thereby enhancing immune responses, H2-M3 is encoded by a gene that maps to mouse chromosome 17 B1.

REFERENCES

1. Fournel, S., et al. 2000. Comparative reactivity of different HLA-G monoclonal antibodies to soluble HLA-G molecules. Tissue Antigens 55: 510-518.
2. Lozano, J.M., et al. 2002. Monocytes and T lymphocytes in HIV-1-positive patients express HLA-G molecule. AIDS 16: 347-351.
3. Pangault, C., et al. 2002. Lung macrophages and dendritic cells express HLA-G molecules in pulmonary diseases. Hum. Immunol. 63: 83-90.
4. Fuzzi, B., et al. 2002. HLA-G expression in early embryos is a fundamental prerequisite for the obtainment of pregnancy. Eur. J. Immunol. 32: 311-315.
5. Boyson, J.E., et al. 2002. Disulfide bond-mediated dimerization of HLA-G on the cell surface. Proc. Natl. Acad. Sci. USA 99: 16180-16185.

CHROMOSOMAL LOCATION

Genetic locus: H2-M3 (mouse) mapping to 17 B1.

PRODUCT

H2-M3 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 H2-M3 shRNA Plasmid (m): sc-145862-SH and H2-M3 shRNA (m) Lentiviral Particles: sc-145862-V as alternate gene silencing products.

For independent verification of H2-M3 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-145862A, sc-145862B and sc-145862C.

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

H2-M3 siRNA (m) is recommended for the inhibition of H2-M3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor H2-M3 gene expression knockdown using RT-PCR Primer: H2-M3 (m)-PR: sc-145862-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.