SANTA CRUZ BIOTECHNOLOGY, INC.

CD155 siRNA (m): sc-142178

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The Power to Question

BACKGROUND

CD155, a member of the immunoglobulin superfamily, acts as the human receptor for poliovirus (PV). All three serotypes of PV- PV1, 2, and 3- exhibit similar binding to CD155 in both its glycosylated and fully deglycosylated forms, indicating they utilize a common mechanism for cell entry. Additionally, CD155 undergoes cell-matrix contacts by binding to the matrix protein vitronectin. Along with the receptor form, three soluble isoforms, α β, and γ, also exist in human serum and cerebrospinal fluid, and CD155 mRNAs are highly expressed in liver tissue. The presence of soluble CD155 reduces polivirus entry mediated by the membrane-bound receptor, implying an important role for these soluble forms in cellular function.

REFERENCES

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2. Ravens, I., et al. 2003. Characterization and identification of Tage4 as the murine orthologue of human poliovirus receptor/CD155. Biochem. Biophys. Res. Commun. 312: 1364-1371.
3. He, Y., et al. 2003. Complexes of poliovirus serotypes with their common cellular receptor, CD155. J. Virol. 77: 4827-4835.
4. Mueller, S., et al. 2003. Recruitment of Nectin 3 to cell-cell junctions through *trans*-heterophilic interaction with CD155, a Vitronectin and poliovirus receptor that localizes to $\alpha_V\beta_3$ Integrin-containing membrane microdomains. J. Biol. Chem. 278: 31251-31260.
5. Kakunaga, S., et al. 2004. Enhancement of serum- and platelet-derived growth factor-induced cell proliferation by Necl-5/Tage4/poliovirus receptor/CD155 through the Ras-Raf-MEK-ERK signaling. J. Biol. Chem. 279: 36419-36425.
6. Hirota, T., et al. 2005. Transcriptional activation of the mouse Necl-5/Tage4/PVR/CD155 gene by fibroblast growth factor or oncogenic Ras through the Raf-MEK-ERK-AP-1 pathway. Oncogene 24: 2229-2235.
7. Tomasec, P., et al. 2005. Downregulation of natural killer cell-activating ligand CD155 by human cytomegalovirus UL141. Nat. Immunol. 6: 181-188.

CHROMOSOMAL LOCATION

Genetic locus: Pvr (mouse) mapping to 7 A3.

PRODUCT

CD155 siRNA (m) 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 CD155 shRNA Plasmid (m): sc-142178-SH and CD155 shRNA (m) Lentiviral Particles: sc-142178-V as alternate gene silencing products.

For independent verification of CD155 (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-142178A, sc-142178B and sc-142178C.

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

CD155 siRNA (m) is recommended for the inhibition of CD155 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 CD155 gene expression knockdown using RT-PCR Primer: CD155 (m)-PR: sc-142178-PR (20 µl, 593 bp). 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.

PROTOCOLS

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