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SANTA CRUZ BIOTECHNOLOGY, INC.

TREM-1 siRNA (m) sc-43000

BACKGROUND

TREM-1 (triggering receptor expressed on myeloid cells-1) is expressed in monocytes and neutrophils but not in lymphocytes, dendritic cells, or other cell types. TREM-1 is a glycoprotein that is reduced by deglycosylation, in agreement with the predicted molecular mass. TREM-1 is an activating receptor of the Ig superfamily that is expressed on human myeloid cells, selectively expressed on blood neutrophils and a subset of monocytes, and is upregulated by bacterial LPS. Immunoblot analysis shows that TREM-1 is associated with DAP12, a molecule frequently associated with activating receptors. TREM-1 and the myeloid DAP12-associating lectin (MDL-1) are recently identified receptors which associate non-covalently with DAP12 to form receptor complexes that are involved in monocytic activation and inflammatory response.

REFERENCES

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2. Bouchon, A., Facchetti, F., Weigand, M.A. and Colonna, M. 2001. TREM-1 amplifies inflammation and is a crucial mediator of septic shock. Nature 410: 1103-1107.
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9. Haselmayer, P., Grosse-Hovest, L., von Landenberg, P., Schild, H. and Radsak, M.P. 2007. TREM-1 ligand expression on platelets enhances neutrophil activation. Blood 110: 1029-1035.

CHROMOSOMAL LOCATION

Genetic locus: Trem1 (mouse) mapping to 17 C.

PRODUCT

TREM-1 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 TREM-1 shRNA Plasmid (m): sc-43000-SH and TREM-1 shRNA (m) Lentiviral Particles: sc-43000-V as alternate gene silencing products.

For independent verification of TREM-1 (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-43000A, sc-43000B and sc-43000C.

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

TREM-1 siRNA (m) is recommended for the inhibition of TREM-1 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 TREM-1 gene expression knockdown using RT-PCR Primer: TREM-1 (m)-PR: sc-43000-PR (20 µl, 512 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Feng, C.W., Chen, N.F., Sung, C.S., Kuo, H.M., Yang, S.N., Chen, C.L., Hung, H.C., Chen, B.H., Wen, Z.H. and Chen, W.F. 2019. Therapeutic effect of modulating TREM-1 via anti-inflammation and autophagy in Parkinson's disease. Front. Neurosci. 13: 769.

RESEARCH USE

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