SANTA CRUZ BIOTECHNOLOGY, INC.

TICAM-1 siRNA (h): sc-106845

BACKGROUND

Toll/interleukin-1 receptor/resistance (TIR) adaptor protein (Trif, TICAM-1) can physically bind TIR domains and influence cell signaling. TICAM-1 interacts with TLR3 and mediates dsRNA activation of interferon-β, through NFκB, AP1 or IRF-3. Human TICAM-1 maps to chromosome 19p13.3.

REFERENCES

1. Yamamoto, M., et al. 2002. Cutting edge: a novel Toll/IL-1 receptor domain-containing adapter that preferentially activates the IFN-β promoter in the Toll-like receptor signaling. J. Immunol. 169: 6668-6672.
2. Hoebe, K., et al. 2003. Identification of Lps2 as a key transducer of MyD88-independent TIR signalling. Nature 424: 743-748.

CHROMOSOMAL LOCATION

Genetic locus: TICAM1 (human) mapping to 19p13.3.

PRODUCT

TICAM-1 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 TICAM-1 shRNA Plasmid (h): sc-106845-SH and TICAM-1 shRNA (h) Lentiviral Particles: sc-106845-V as alternate gene silencing products.

For independent verification of TICAM-1 (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-106845A, sc-106845B and sc-106845C.

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

TICAM-1 siRNA (h) is recommended for the inhibition of TICAM-1 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 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

TICAM-1 (E-7): sc-514384 is recommended as a control antibody for monitoring of TICAM-1 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 TICAM-1 gene expression knockdown using RT-PCR Primer: TICAM-1 (h)-PR: sc-106845-PR (20 µl, 443 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Kusagaya, H., et al. 2014. Toll-like receptor-mediated airway IL-17C enhances epithelial host defense in an autocrine/paracrine manner. Am. J. Respir. Cell Mol. Biol. 50: 30-39.
2. Lv, X., et al. 2018. Herpes simplex virus type 2 infection triggers AP-1 transcription activity through TLR4 signaling in genital epithelial cells. Virol. J. 15: 173.
3. Kim, D., et al. 2019. Noncoding dsRNA induces retinoic acid synthesis to stimulate hair follicle regeneration via TLR3. Nat. Commun. 10: 2811.
4. Kim, J., et al. 2019. Bacterial clearance is enhanced by α2,3- and α2,6-sialyllactose via receptor-mediated endocytosis and phagocytosis. Infect. Immun. 87: e00694-18.
5. Shin, S.H., et al. 2020. 1-palmitoyl-2-linoleoyl-3-acetyl-rac-glycerol (PLAG) mitigates monosodium urate (MSU)-induced acute gouty inflammation in BALB/c mice. Front. Immunol. 11: 710.

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.