SANTA CRUZ BIOTECHNOLOGY, INC.

TULA siRNA (h): sc-91418

BACKGROUND

TULA (T cell ubiquitin ligand), also known as UBASH3A (ubiquitin associated and SH3 domain containing A), STS-2 or CLIP4, is a 661 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one SH3 domain and one UBA domain. Expressed at high levels in thymus, bone marrow, spleen and peripheral blood leukocytes, TULA exists as either a homodimer or a homo-oligomer that interferes with the degradation of receptor-type tyrosine kinases and promotes the accumulation of activated receptors on the cell surface. Additionally, TULA is part of an EGFR- and Cbl-containing complex that interacts with ubiquitinated proteins. The gene encoding TULA, which maps to human chromosome 21, may be involved in the pathogenesis of type I diabetes. Multiple isoforms of TULA are produced due to alternative splicing events.

REFERENCES

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4. Bertelsen, V., et al. 2007. The Cbl-interacting protein TULA inhibits dynamin-dependent endocytosis. Exp. Cell Res. 313: 1696-1709.
5. Collingwood, T.S., et al. 2007. T-cell ubiquitin ligand affects cell death through a functional interaction with apoptosis-inducing factor, a key factor of caspase-independent apoptosis. J. Biol. Chem. 282: 30920-30928.
6. Concannon, P., et al. 2008. A human type 1 diabetes susceptibility locus maps to chromosome 21q22.3. Diabetes 57: 2858-2861.
7. Agrawal, R., et al. 2008. TULA proteins regulate activity of the protein tyrosine kinase Syk. J. Cell. Biochem. 104: 953-964.
8. Smirnova, E.V., et al. 2008. TULA proteins bind to ABCE-1, a host factor of HIV-1 assembly, and inhibit HIV-1 biogenesis in a UBA-dependent fashion. Virology 372: 10-23.

CHROMOSOMAL LOCATION

Genetic locus: UBASH3A (human) mapping to 21q22.3.

PRODUCT

TULA 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 TULA shRNA Plasmid (h): sc-91418-SH and TULA shRNA (h) Lentiviral Particles: sc-91418-V as alternate gene silencing products.

For independent verification of TULA (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-91418A, sc-91418B and sc-91418C.

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

TULA siRNA (h) is recommended for the inhibition of TULA 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TULA gene expression knockdown using RT-PCR Primer: TULA (h)-PR: sc-91418-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.

PROTOCOLS

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