

SLA2 siRNA (h): sc-76503

BACKGROUND

SLA2 (Src-like-adaptor 2), also known as C20orf156 or SLAP2, is a 261 amino acid protein that exists as four alternatively spliced isoforms which localize to either the cytoplasm or to the cell membrane and contain one SH2 domain and one SH3 domain. Expressed predominately in tissues of the immune system, including thymus, spleen and lymph nodes, SLA2 functions as an adaptor protein that negatively regulates T-cell receptor (TCR) signaling and may inhibit T-cell activation. SLA2 interacts with Zap-70 and is subject to post-translational phosphorylation. The gene encoding SLA2 maps to human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, RING chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

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- Pandey, A., et al. 2002. A novel Src homology 2 domain-containing molecule, Src-like adapter protein-2 (SLAP2), which negatively regulates T cell receptor signaling. *J. Biol. Chem.* 277: 19131-19138.
- Loreto, M.P., et al. 2002. Functional cooperation between c-Cbl and Src-like adaptor protein 2 in the negative regulation of T-cell receptor signaling. *Mol. Cell. Biol.* 22: 4241-4255.
- Loreto, M.P. and McGlade, C.J. 2003. Cloning and characterization of human Src-like adaptor protein 2 and a novel splice isoform, SLAP-2-v. *Oncogene* 22: 266-273.
- Dragone, L.L., et al. 2006. Src-like adaptor protein (SLAP) regulates B cell receptor levels in a c-Cbl-dependent manner. *Proc. Natl. Acad. Sci. USA* 103: 18202-18207.

CHROMOSOMAL LOCATION

Genetic locus: SLA2 (human) mapping to 20q11.23.

PRODUCT

SLA2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLA2 shRNA Plasmid (h): sc-76503-SH and SLA2 shRNA (h) Lentiviral Particles: sc-76503-V as alternate gene silencing products.

For independent verification of SLA2 (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-76503A, sc-76503B and sc-76503C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SLA2 siRNA (h) is recommended for the inhibition of SLA2 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 μ M in 66 μ l. 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

SLA2 (E-8): sc-398134 is recommended as a control antibody for monitoring of SLA2 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 SLA2 gene expression knockdown using RT-PCR Primer: SLA2 (h)-PR: sc-76503-PR (20 μ l). 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.