

## ECSIT siRNA (h): sc-77224

### BACKGROUND

ECSIT (Evolutionarily conserved signaling intermediate in Toll pathway) is a 431 amino acid ubiquitously expressed protein that plays an important role as an adaptor protein in the cytosolic signal transduction cascade events triggered by Toll receptor activation. Within the Toll pathway, ECSIT regulates MEKK1 processing for activation of NF $\kappa$ B, a major event leading to initiation of the innate immune response. In the mitochondria, ECSIT interacts with NDUFAF1 and assists in the formation of NADH:ubiquinone oxidoreductase (complex I), an extremely complicated multiprotein complex located in the inner mitochondrial membrane that functions in the transport of electrons from NADH to ubiquinone. Knockdown of ECSIT results in severely impaired complex I assembly and disturbed mitochondrial function. There are two isoforms of ECSIT that are produced as a result of alternative splicing events.

### REFERENCES

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2. Moustakas, A. and Heldin, C.H. 2003. ECSIT-ement on the crossroads of Toll and BMP signal transduction. *Genes Dev.* 17: 2855-2859.
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### CHROMOSOMAL LOCATION

Genetic locus: ECSIT (human) mapping to 19p13.2.

### PRODUCT

ECSIT siRNA (h) is a pool of 2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ECSIT shRNA Plasmid (h): sc-77224-SH and ECSIT shRNA (h) Lentiviral Particles: sc-77224-V as alternate gene silencing products.

For independent verification of ECSIT (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-77224A and sc-77224B.

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

### APPLICATIONS

ECSIT siRNA (h) is recommended for the inhibition of ECSIT 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  $\mu$ M in 66  $\mu$ 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.

### RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ECSIT gene expression knockdown using RT-PCR Primer: ECSIT (h)-PR: sc-77224-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.