

# EAT-2 siRNA (m): sc-42971

## BACKGROUND

The pathogenesis of the Ewing sarcoma family of tumors is characterized by the presence of an EWS/FLI1 fusion gene following a translocation between chromosomes 11 and 22, which results in the expression of a chimeric protein. Originally isolated from Ewing's sarcoma tumor cells lines, the EWS/FLI1 activated transcript 2 (EAT-2) protein is an intracellular signaling protein that is expressed in immune cells, including macrophages and B lymphocytes. EAT-2 is expressed in NIH/3T3 cells within 4-8 hours of EWS/FLI1 induction, suggesting a potential role for EAT-2 in the oncogenesis of Ewing's sarcoma. EAT-2 binds members of the signaling lymphocytic-activation molecule (SLAM) family of immune receptors, which are present in varying levels in immune cells. Specifically, EAT-2 plays a role in controlling the signal transduction of antigen-presenting cells by binding to SLAM family members CD150, CD244, CD84 and CD229, which contain conserved tyrosine motifs in their cytoplasmic tails.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Sh2d1b1 (mouse) mapping to 1 H3.

## PRODUCT

EAT-2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see EAT-2 shRNA Plasmid (m): sc-42971-SH and EAT-2 shRNA (m) Lentiviral Particles: sc-42971-V as alternate gene silencing products.

For independent verification of EAT-2 (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-42971A, sc-42971B and sc-42971C.

## 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

EAT-2 siRNA (m) is recommended for the inhibition of EAT-2 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  $\mu$ 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 EAT-2 gene expression knockdown using RT-PCR Primer: EAT-2 (m)-PR: sc-42971-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.