

# Jaw1 siRNA (m): sc-42927

## BACKGROUND

Jaw1, a type II membrane protein, localizes to the endoplasmic reticulum and is regulated during lymphoid cell development. Expression of Jaw1 is restricted to lymphoid B and T cell lineages and it is down-regulated during terminal differentiation. The protein sequence of Jaw1 shares closet similarities with MRV1, a protein specifically expressed in megakaryocytes. Post-translational processing of Jaw1 at the carboxyl terminus confers its association with the ER, where it co-localizes with the ER marker BiP. The Jaw1 protein contains a coiled-coil domain in the middle-third of the protein and a membrane anchor with a conserved 36-amino acid luminal tail at the carboxy-terminus. Consistent with its expression patterns and endoplasmic reticulum localization, Jaw1 is implicated in regulating antigen receptor assembly and trafficking during lymphoid development.

## REFERENCES

- Behrens, T.W., et al. 1994. Jaw1, A lymphoid-restricted membrane protein localized to the endoplasmic reticulum. *J. Immunol.* 153: 682-690.
- Behrens, T.W., et al. 1996. Carboxyl-terminal targeting and novel post-translational processing of JAW1, a lymphoid protein of the endoplasmic reticulum. *J. Biol. Chem.* 271: 23528-23534.
- Yang, M., et al. 1997. The transmembrane domain of a carboxyl-terminal anchored protein determines localization to the endoplasmic reticulum. *J. Biol. Chem.* 272: 1970-1975.
- Shaughnessy, J.D., Jr., et al. 1999. Mrv1, a common MRV integration site in BXH2 myeloid leukemias, encodes a protein with homology to a lymphoid-restricted membrane protein Jaw1. *Oncogene* 18: 2069-2084.

## CHROMOSOMAL LOCATION

Genetic locus: Lrmp (mouse) mapping to 6 G3.

## PRODUCT

Jaw1 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 Jaw1 shRNA Plasmid (m): sc-42927-SH and Jaw1 shRNA (m) Lentiviral Particles: sc-42927-V as alternate gene silencing products.

For independent verification of Jaw1 (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-42927A, sc-42927B and sc-42927C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at  $-20^{\circ}$  C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at  $-20^{\circ}$  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

Jaw1 siRNA (m) is recommended for the inhibition of Jaw1 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.

## GENE EXPRESSION MONITORING

Jaw1 (D-12): sc-390207 is recommended as a control antibody for monitoring of Jaw1 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Jaw1 gene expression knockdown using RT-PCR Primer: Jaw1 (m)-PR: sc-42927-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60 $^{\circ}$  C and the extension temperature should be 68-72 $^{\circ}$  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.