

# Produktinformation



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## Zuschläge

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#### SANTA CRUZ BIOTECHNOLOGY, INC.

## Talin-2 siRNA (m): sc-43106



#### BACKGROUND

Focal adhesions were identified as areas within the plasma membrane of tissue culture cells that adhere tightly to the underlying substrate. *In vivo*, these regions are involved in the adhesion of cells to the extracellular matrix. Paxillin and vinculin are cytoskeletal, focal adhesion proteins that are components of a protein complex that links the Actin network to the plasma membrane. Vinculin binding sites have been identified on other cytoskeletal proteins, including Talin-1 and  $\alpha$ -actinin. In addition, vinculin, Talin-1, Talin-2 and  $\alpha$ -actinin each contain Actin binding sites. Expression of vinculin, Talin-1 and Talin-2 have been shown to be affected by the level of Actin expression.  $\alpha$ -actinin has been shown to link Actin to integrins in the plasma membrane through interactions with the vinculin and Talin complex or by a direct interaction with integrin. Talin-2 is similar to Talin-1 but shows distinct patterns of expression and cannot compensate for the loss of Talin-1.

#### REFERENCES

- Burridge, K., et al. 1988. Focal adhesions: transmembrane junctions between the extracellular matrix and the cytoskeleton. Annu. Rev. Cell Biol. 4: 487-525.
- Gilmore, A.P., et al. 1992. Further characterization of the Talin-binding site in the cytoskeletal protein vinculin. J. Cell Sci. 103: 719-731.
- Wood, C.K., et al. 1994. Characterisation of the paxillin-binding site and the C-terminal focal adhesion targeting sequence in vinculin. J. Cell Sci. 107: 709-717.
- Gluck, U., et al. 1994. Modulation of α-actinin levels affects cell motility and confers tumorigenicity on 3T3 cells. J. Cell Sci. 107: 1773-1782.
- Schevzov, G., et al. 1995. Impact of Actin gene expression on vinculin, Talin, cell spreading and motility. DNA Cell Biol. 14: 689-700.
- Hemmings, L., et al. 1996. Talin contains three Actin-binding sites each of which is adjacent to a vinculin-binding site. J. Cell Sci. 109: 2715-2726.
- 7. Gilmore, A.P., et al. 1996. Regulation of vinculin binding to Talin and Actin by phosphatidyl-inositol-4-5-bisphosphate. Nature 381: 531-535.
- 8. Franco, S.J., et al. 2006. The conserved C-terminal I/LWEQ module targets Talin-1 to focal adhesions. Cell Motil. Cytoskeleton 63: 563-581.

#### CHROMOSOMAL LOCATION

Genetic locus: Tln2 (mouse) mapping to 9 C.

#### PRODUCT

Talin-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 Talin-2 shRNA Plasmid (m): sc-43106-SH and Talin-2 shRNA (m) Lentiviral Particles: sc-43106-V as alternate gene silencing products.

For independent verification of Talin-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-43106A, sc-43106B and sc-43106C.

#### 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**

Talin-2 siRNA (m) is recommended for the inhibition of Talin-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 Talin-2 gene expression knockdown using RT-PCR Primer: Talin-2 (m)-PR: sc-43106-PR (20  $\mu$ I). 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.