



# CIB2 siRNA (h): sc-89944

## BACKGROUND

CIB2 (calcium and integrin-binding family member 2) is a 187 amino acid protein encoded by the human gene CIB2. CIB2 is a ubiquitously expressed protein that contains three EF-hand domains. CIB2 is closely related to CIB1 (CIB1 has one less EF-hand domain), which is known to bind to Integrin  $\alpha$ IIb in platelets and is involved in signal transduction. CIB2 expression is significantly reduced in Laminin  $\alpha$ -2 chain deficient muscle, but is unaffected in the mouse model for Duchenne muscular dystrophy. This indicates that CIB2 is likely involved in the pathogenesis of MDC1A, a congenital muscular dystrophy caused by mutations in the gene encoding Laminin  $\alpha$ -2 chain. CIB2 also binds to Integrin  $\alpha$ 7 and calcium, indicating that CIB2 has various functions in signalling pathways.

## REFERENCES

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2. Zody, M.C., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. *Nature* 440: 671-675.
3. Diene, G., et al. 2007. The Prader-Willi syndrome. *Ann. Endocrinol.* 68: 129-137.
4. Lalonde, M., et al. 2007. Molecular epigenetics of Angelman syndrome. *Cell. Mol. Life Sci.* 64: 947-960.
5. Maegawa, G.H., et al. 2007. Pyrimethamine as a potential pharmacological chaperone for late-onset forms of GM2 gangliosidosis. *J. Biol. Chem.* 282: 9150-9161.
6. Makoff, A.J., et al. 2007. Detailed analysis of 15q11-q14 sequence corrects errors and gaps in the public access sequence to fully reveal large segmental duplications at breakpoints for Prader-Willi, Angelman, and inv dup(15) syndromes. *Genome Biol.* 8: R114.
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## CHROMOSOMAL LOCATION

Genetic locus: CIB2 (human) mapping to 15q25.1.

## PRODUCT

CIB2 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 CIB2 shRNA Plasmid (h): sc-89944-SH and CIB2 shRNA (h) Lentiviral Particles: sc-89944-V as alternate gene silencing products.

For independent verification of CIB2 (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-89944A and sc-89944B.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## 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

CIB2 siRNA (h) is recommended for the inhibition of CIB2 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.

## GENE EXPRESSION MONITORING

CIB2 (CIB2C12B11): sc-81068 is recommended as a control antibody for monitoring of CIB2 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).

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CIB2 gene expression knockdown using RT-PCR Primer: CIB2 (h)-PR: sc-89944-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.