



CDO siRNA (m): sc-60346

BACKGROUND

Cell adhesion molecule-related/downregulated by oncogenes (CDO) and BOC (brother of CDO) are members of the immunoglobulin/fibronectin type III repeat family and act as cell surface receptors. CDO is a component of a cell-surface receptor complex which also contains BOC, NEO1, CTNNB1 and cadherins, and which acts as a mediator of cell-cell interactions between muscle cells. CDO and BOC are single pass membrane proteins that play a role in myogenic cell differentiation. Together, CDO and BOC participate in a positive feedback loop with MyoD, a myogenic transcription factor. The 1,242 amino acid rat CDO protein has a 24 residue signal sequence, five Ig V-like repeats, a 25 residue membrane-spanning region, three FNIII-like repeats and a cytoplasmic region of 256 amino acids containing a proline-rich stretch. The human protein contains 1,225 amino acid residues and shares significant homology with the domain structures of the rat protein.

REFERENCES

1. Kang, J.S., et al. 1997. CDO: an oncogene-, serum-, and anchorage-regulated member of the Ig/Fibronectin type III repeat family. *J. Cell Biol.* 138: 203-213.
2. Kang, J.S., et al. 1998. CDO, a robo-related cell surface protein that mediates myogenic differentiation. *J. Cell Biol.* 143: 403-413.
3. Kang, J.S., et al. 2002. BOC, an Ig superfamily member, associates with CDO to positively regulate myogenic differentiation. *EMBO J.* 21: 114-124.
4. Wegorzewska, M., et al. 2003. Overexpression of the immunoglobulin superfamily members CDO and BOC enhances differentiation of the human rhabdomyosarcoma cell line RD. *Mol. Carcinog.* 37: 1-4.

CHROMOSOMAL LOCATION

Genetic locus: Cdon (mouse) mapping to 9 A4.

PRODUCT

CDO 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CDO shRNA Plasmid (m): sc-60346-SH and CDO shRNA (m) Lentiviral Particles: sc-60346-V as alternate gene silencing products.

For independent verification of CDO (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-60346A, sc-60346B and sc-60346C.

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

APPLICATIONS

CDO siRNA (m) is recommended for the inhibition of CDO 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 μ M in 66 μ 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

CDO (A-1): sc-377232 is recommended as a control antibody for monitoring of CDO 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 κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CDO gene expression knockdown using RT-PCR Primer: CDO (m)-PR: sc-60346-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Capurro, M.I., et al. 2009. Overgrowth of a mouse model of Simpson-Golabi-Behmel syndrome is partly mediated by Indian hedgehog. *EMBO Rep.* 10: 901-907.

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.