

# ACLP/AEBP1 siRNA (m): sc-40328

## BACKGROUND

Aortic carboxypeptidase-like protein (ACLP), of which adipocyte enhancer binding protein 1 (AEBP1) is an isoform, is a transcriptional repressor with carboxypeptidase activity that is expressed in vascular smooth muscle cells, and at lower levels in adipose and osteoblastic cells. ACLP contains a signal peptide sequence, a lysine- and proline-rich repeating motif, a discoidin-like protein and a carboxypeptidase-like domain. ACLP is secreted into the extracellular matrix and may play a role in abdominal wall development and dermal wound healing. Additionally, ACLP is downregulated during adipogenesis and upregulated during vascular smooth muscle cell differentiation, suggesting a possible role in tissue development. AEBP1, which may function as a transcriptional repressor, is a truncated form of ACLP which specifically lacks a 380 amino acid N-terminal sequence.

## REFERENCES

1. Layne, M.D., et al. 1998. Aortic carboxypeptidase-like protein, a novel protein with discoidin and carboxypeptidase-like domains, is upregulated during vascular smooth muscle cell differentiation. *J. Biol. Chem.* 273: 15654-15660.
2. Layne, M.D., et al. 2001. Impaired abdominal wall development and deficient wound healing in mice lacking aortic carboxypeptidase-like protein. *Mol. Cell. Biol.* 21: 5256-5261.
3. Ro, H.S., et al. 2001. Gene structure and expression of the mouse adipocyte enhancer-binding protein. *Gene* 280: 123-133.
4. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 602981. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Layne, M.D., et al. 2002. Characterization of the mouse aortic carboxypeptidase-like protein promoter reveals activity in differentiated and dedifferentiated vascular smooth muscle cells. *Circ. Res.* 90: 728-736.
6. LocusLink Report (LocusID: 165). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: Aebp1 (mouse) mapping to 11 A1.

## PRODUCT

ACLP/AEBP1 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 ACLP/AEBP1 shRNA Plasmid (m): sc-40328-SH and ACLP/AEBP1 shRNA (m) Lentiviral Particles: sc-40328-V as alternate gene silencing products.

For independent verification of ACLP/AEBP1 (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-40328A, sc-40328B and sc-40328C.

## 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

ACLP/AEBP1 siRNA (m) is recommended for the inhibition of ACLP/AEBP1 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

ACLP/AEBP1 (G-1): sc-271374 is recommended as a control antibody for monitoring of ACLP/AEBP1 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 ACLP/AEBP1 gene expression knockdown using RT-PCR Primer: ACLP/AEBP1 (m)-PR: sc-40328-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.