



## FAT2 siRNA (m): sc-145080

### BACKGROUND

The cadherins represent a family of  $\text{Ca}^{2+}$ -dependent adhesion molecules that function to mediate cell to cell binding that is critical for the maintenance of structure and morphogenesis. Cadherins each contain a large extracellular domain at the N-terminus, which is characterized by a series of five homologous repeats, the most distal of which is thought to be responsible for binding specificity. The relatively short C-terminal intracellular domain interacts with a variety of cytoplasmic proteins, including  $\beta$ -catenin, to regulate cadherin function. The cadherin superfamily includes cadherins, protocadherins, desmogleins and desmocollins. FAT2 (FAT tumor suppressor homolog 2), also known as CDHF8, HFAT2 or MEGF1 (multiple epidermal growth factor-like domains 1), is a single-pass type I membrane protein that belongs to the protocadherin subfamily of cadherins. FAT2 contains one Laminin G-like domain, 2 EGF-like domains and 32 cadherin domains and is believed to function as a cell adhesion molecule.

### REFERENCES

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8. Hirayama, T., et al. 2006. The role and expression of the protocadherin- $\alpha$  clusters in the CNS. *Curr. Opin. Neurobiol.* 16: 336-342.
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### CHROMOSOMAL LOCATION

Genetic locus: Fat2 (mouse) mapping to 11 B1.3.

### PRODUCT

FAT2 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu\text{M}$  solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FAT2 shRNA Plasmid (m): sc-145080-SH and FAT2 shRNA (m) Lentiviral Particles: sc-145080-V as alternate gene silencing products.

### STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at  $-20^{\circ}\text{C}$  with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at  $-20^{\circ}\text{C}$ , avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu\text{l}$  of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu\text{l}$  of RNase-free water makes a 10  $\mu\text{M}$  solution in a 10  $\mu\text{M}$  Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

FAT2 siRNA (m) is recommended for the inhibition of FAT2 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  $\mu\text{M}$  in 66  $\mu\text{l}$ . 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 FAT2 gene expression knockdown using RT-PCR Primer: FAT2 (m)-PR: sc-145080-PR (20  $\mu\text{l}$ ). Annealing temperature for the primers should be  $55-60^{\circ}\text{C}$  and the extension temperature should be  $68-72^{\circ}\text{C}$ .

### 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.