

# FAM120B siRNA (m): sc-140257

## BACKGROUND

FAM120B (family with sequence similarity 120B), also known as PPARG constitutive coactivator 1 (PGCC1), CCPG, or KIAA1838 is a 910 amino acid nuclear protein that exists as three isoforms produced by alternative splicing. FAM120B belongs to the constitutive coactivator of PPAR- $\gamma$  family and contains four LXXLL motifs, which are characteristic for nuclear receptor coactivators. FAM120B is thought to function as a transactivator of PPARG and ESR1, and to promote adipogenesis in a PPAR- $\gamma$  dependent manner. The interaction of FAM120B with PPARG does not depend on the LXXLL motif and is ligand-independent. The gene for human FAM120B is located on chromosome 6 and is conserved in chimpanzee, Rhesus monkey, canine, mouse, rat, chicken, zebrafish and frog. Making up nearly 6% of the human genome, chromosome 6 contains around 1,200 genes within 170 million base pairs of sequence.

## REFERENCES

1. Nagase, T., et al. 2001. Prediction of the coding sequences of unidentified human genes. XX. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 8: 85-95.
2. Holden, S. and Raymond, F.L. 2003. The human gene CXorf17 encodes a member of a novel family of putative transmembrane proteins: cDNA cloning and characterization of CXorf17 and its mouse ortholog orf34. Gene 318: 149-161.
3. Mungall, A.J., et al. 2003. The DNA sequence and analysis of human chromosome 6. Nature 425: 805-811.
4. Li, D., et al. 2007. Constitutive coactivator of peroxisome proliferator-activated receptor (PPAR $\gamma$ ), a novel coactivator of PPAR $\gamma$  that promotes adipogenesis. Mol. Endocrinol. 21: 2320-2333.
5. Bradfield, J.P., et al. 2011. A genome-wide meta-analysis of six type 1 diabetes cohorts identifies multiple associated loci. PLoS Genet. 7: e1002293.
6. Lu, L., et al. 2013. The HECT type ubiquitin ligase NEDL2 is degraded by anaphase-promoting complex/cyclosome (APC/C)-Cdh1, and its tight regulation maintains the metaphase to anaphase transition. J. Biol. Chem. 288: 35637-35650.

## CHROMOSOMAL LOCATION

Genetic locus: Fam120b (mouse) mapping to 17 A2.

## PRODUCT

FAM120B 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 FAM120B shRNA Plasmid (m): sc-140257-SH and FAM120B shRNA (m) Lentiviral Particles: sc-140257-V as alternate gene silencing products.

For independent verification of FAM120B (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-140257A, sc-140257B and sc-140257C.

## 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

FAM120B siRNA (m) is recommended for the inhibition of FAM120B 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 FAM120B gene expression knockdown using RT-PCR Primer: FAM120B (m)-PR: sc-140257-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.