

## FKSG80 siRNA (m): sc-44644

### BACKGROUND

G protein-coupled receptor 81 (FKSG80) belongs to the G protein-coupled receptor 1 family. It is an integral membrane protein which functions as an orphan receptor. The gene encoding the FKSG80 protein, GPR81, maps to chromosome 12q24.31 in humans. The FKSG80 protein is a 347 amino acid protein that shares 70% homology to the chemokine receptor HM74. FKSG80 is expressed mainly in pituitary, but can also be detected in adipose tissue. It is not found in hippocampus, basal forebrain, frontal, temporal and occipital lobes of the cortex, caudate nucleus or nucleus accumbens.

### REFERENCES

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2. Wise, A., Foord, S.M., Fraser, N.J., Barnes, A.A., Elshourbagy, N., Eilert, M., Ignar, D.M., Murdock, P.R., Stepkowski, K., Green, A., Brown, A.J., Dowell, S.J., Szekeres, P.G., Hassall, D.G., Marshall, F.H., et al. 2003. Molecular identification of high and low affinity receptors for nicotinic acid. *J. Biol. Chem.* 278: 9869-9874.
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4. Mao, M., Biery, M.C., Kobayashi, S.V., Ward, T., Schimmack, G., Burchard, J., Schelter, J.M., Dai, H., He, Y.D. and Linsley, P.S. 2004. T lymphocyte activation gene identification by co-regulated expression on DNA microarrays. *Genomics* 83: 989-999.
5. SWISS-PROT/TrEMBL (Q9BXC0). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>.

### CHROMOSOMAL LOCATION

Genetic locus: Gpr81 (mouse) mapping to 5 F.

### PRODUCT

FKSG80 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 FKSG80 shRNA Plasmid (m): sc-44644-SH and FKSG80 shRNA (m) Lentiviral Particles: sc-44644-V as alternate gene silencing products.

For independent verification of FKSG80 (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-44644A, sc-44644B and sc-44644C.

### PROTOCOLS

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

### 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

FKSG80 siRNA (m) is recommended for the inhibition of FKSG80 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 FKSG80 gene expression knockdown using RT-PCR Primer: FKSG80 (m)-PR: sc-44644-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

### SELECT PRODUCT CITATIONS

1. Luo, M., Zhu, J., Ren, J., Tong, Y., Wang, L., Ma, S. and Wang, J. 2022. Lactate increases tumor malignancy by promoting tumor small extracellular vesicles production via the GPR81-cAMP-PKA-HIF-1 $\alpha$  axis. *Front. Oncol.* 12: 1036543.

### RESEARCH USE

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