

FAM120A siRNA (m): sc-141500

BACKGROUND

FAM120A, also known as OSSA (oxidative stress-associated Src activator) or C9orf10, is a 1,118 amino acid tumor suppressor that localizes to the cytoplasm and cell membrane. FAM120A is ubiquitously expressed with high protein levels present in scirrhous-type gastric cancer tissues compared to normal gastric mucosa. Belonging to the constitutive coactivator of PPAR- γ family, FAM120A activates src family kinases and is an essential protein involved in the oxidative stress-induced survival signaling pathway. FAM120A binds RNA, promotes secretion of IGF-II and exists as five alternatively spliced isoforms. The gene encoding FAM120A maps to human chromosome 9, which consists of about 145 million bases and 4% of the human genome and encodes nearly 900 genes.

REFERENCES

1. Nagase, T., Seki, N., Ishikawa, K., Tanaka, A. and Nomura, N. 1996. Prediction of the coding sequences of unidentified human genes. V. The coding sequences of 40 new genes (KIAA0161-KIAA0200) deduced by analysis of cDNA clones from human cell line KG-1. *DNA Res.* 3: 17-24.
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. Dephoure, N., Zhou, C., Villen, J., Beausoleil, S.A., Bakalarski, C.E., Elledge, S.J. and Gygi, S.P. 2008. A quantitative atlas of mitotic phosphorylation. *Proc. Natl. Acad. Sci. USA* 105: 10762-10767.
4. Tanaka, M., Sasaki, K., Kamata, R., Hoshino, Y., Yanagihara, K. and Sakai, R. 2009. A novel RNA-binding protein, OSSA/C9orf10, regulates activity of Src kinases to protect cells from oxidative stress-induced apoptosis. *Mol. Cell. Biol.* 29: 402-413.
5. Mayya, V., Lundgren, D.H., Hwang, S.I., Rezau, K., Wu, L., Eng, J.K., Rodionov, V. and Han, D.K. 2009. Quantitative phosphoproteomic analysis of T cell receptor signaling reveals system-wide modulation of protein-protein interactions. *Sci. Signal.* 2: ra46.
6. Burkard, T.R., Planyavsky, M., Kaupe, I., Breitwieser, F.P., Bürckstümmer, T., Bennett, K.L., Superti-Furga, G. and Colinge, J. 2011. Initial characterization of the human central proteome. *BMC Syst. Biol.* 5: 17.
7. Bian, Y., Song, C., Cheng, K., Dong, M., Wang, F., Huang, J., Sun, D., Wang, L., Ye, M. and Zou, H. 2014. An enzyme assisted RP-RPLC approach for in-depth analysis of human liver phosphoproteome. *J. Proteomics* 96: 253-262.

CHROMOSOMAL LOCATION

Genetic locus: Fam120a (mouse) mapping to 13 A5.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

FAM120A siRNA (m) is a pool of 2 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 FAM120A shRNA Plasmid (m): sc-141500-SH and FAM120A shRNA (m) Lentiviral Particles: sc-141500-V as alternate gene silencing products.

For independent verification of FAM120A (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-141500A and sc-141500B.

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

FAM120A siRNA (m) is recommended for the inhibition of FAM120A 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FAM120A gene expression knockdown using RT-PCR Primer: FAM120A (m)-PR: sc-141500-PR (20 μ 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.