SANTA CRUZ BIOTECHNOLOGY, INC.

ORF19 siRNA (m): sc-151312

BACKGROUND

ORF19, also known as Wash1 (WAS protein family homolog 1), is a 475 amino acid protein that belongs to the WASH1 family and contains one WH2 domain. Ubiquitously expressed, ORF19 localizes to the endosome membrane. ORF19 is a component of the WASH complex, which additionally includes CapZ-α1, CapZ-α2, CapZ-α3, CapZ-β, FAM21, KIAA1033, Strumpellin and CCDC53. ORF19 interacts directly with FAM21 via the WHD1 region. Acting as a nucleation-promoting factor, ORF19 may function in the recruitment and activation the Arp2/3 complex. This process plays a role in the fission of tubules that serve as transport intermediates during endosome sorting. The gene encoding ORF19 maps to mouse chromosome 17 E1.1.

REFERENCES

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2. Li, H., Bishop, K.M. and O'Leary, D.D. 2006. Potential target genes of EMX2 include Odz/Ten-M and other gene families with implications for cortical patterning. Mol. Cell. Neurosci. 33: 136-149.
3. Hansen, G.M., Markesich, D.C., Burnett, M.B., Zhu, Q., Dionne, K.M., Richter, L.J., Finnell, R.H., Sands, A.T., Zambrowicz, B.P. and Abuin, A. 2008. Large-scale gene trapping in C57BL/6N mouse embryonic stem cells. Genome Res. 18: 1670-1679.
4. Derivery, E., Sousa, C., Gautier, J.J., Lombard, B., Loew, D. and Gautreau, A. 2009. The Arp2/3 activator WASH controls the fission of endosomes through a large multiprotein complex. Dev. Cell 17: 712-723.

CHROMOSOMAL LOCATION

Genetic locus: Wash (mouse) mapping to 17 E1.1.

PRODUCT

ORF19 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ORF19 shRNA Plasmid (m): sc-151312-SH and ORF19 shRNA (m) Lentiviral Particles: sc-151312-V as alternate gene silencing products.

For independent verification of ORF19 (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-151312A, sc-151312B and sc-151312C.

RESEARCH USE

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

PROTOCOLS

See our web site at 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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ORF19 siRNA (m) is recommended for the inhibition of ORF19 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 µM in 66 µl. 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 ORF19 gene expression knockdown using RT-PCR Primer: ORF19 (m)-PR: sc-151312-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.