

OASL2 siRNA (m): sc-150148

BACKGROUND

The 2', 5'-oligoadenylate synthetases (OASs) are interferon-induced proteins that play a putative role in mediating resistance to virus infection, control of cell growth, differentiation and apoptosis. OASs are also important in the antiviral activity of interferons. OASL2 (2'-5' oligoadenylate synthetase-like 2), also known as M1204 or Mmu-OASL, is a 508 amino acid murine protein that contains a ubiquitin-like domain and is expressed in spleen, thymus, lung and bone marrow. OASL2 is thought to prevent virus-induced cell death in spleen dendritic cells and is encoded by a gene that maps to mouse chromosome 5 F.

REFERENCES

1. Tiefenthaler, M., et al. 1999. M1204, a novel 2',5' oligoadenylate synthetase with a ubiquitin-like extension, is induced during maturation of murine dendritic cells. *J. Immunol.* 163: 760-765.
2. Rebouillat, D., et al. 1999. The human 2',5'-oligoadenylate synthetase family: interferon-induced proteins with unique enzymatic properties. *J. Interferon Cytokine Res.* 19: 295-308.
3. Kumar, S., et al. 2000. Expansion and molecular evolution of the interferon-induced 2'-5' oligoadenylate synthetase gene family. *Mol. Biol. Evol.* 17: 738-750.
4. Eskildsen, S., et al. 2003. Characterization of the 2'-5'-oligoadenylate synthetase ubiquitin-like family. *Nucleic Acids Res.* 31: 3166-3173.
5. Zambrowicz, B.P., et al. 2003. Wnk1 kinase deficiency lowers blood pressure in mice: a gene-trap screen to identify potential targets for therapeutic intervention. *Proc. Natl. Acad. Sci. USA* 100: 14109-14114.
6. Magdaleno, S., et al. 2006. BGEM: an *in situ* hybridization database of gene expression in the embryonic and adult mouse nervous system. *PLoS Biol.* 4: e86.
7. Hovanessian, A.G., et al. 2007. The human 2'-5' oligoadenylate synthetase family: unique interferon-inducible enzymes catalyzing 2'-5' instead of 3'-5' phosphodiester bond formation. *Biochimie* 89: 779-788.

CHROMOSOMAL LOCATION

Genetic locus: *Oasl2* (mouse) mapping to 5 F.

PRODUCT

OASL2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see OASL2 shRNA Plasmid (m): sc-150148-SH and OASL2 shRNA (m) Lentiviral Particles: sc-150148-V as alternate gene silencing products.

For independent verification of OASL2 (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-150148A, sc-150148B and sc-150148C.

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 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

OASL2 siRNA (m) is recommended for the inhibition of OASL2 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 OASL2 gene expression knockdown using RT-PCR Primer: OASL2 (m)-PR: sc-150148-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.