

Siva siRNA (m): sc-37386

BACKGROUND

A cytoplasmic domain of approximately 80 amino acids was identified in the apoptosis-mediating receptors TNFR1 and FAS. This region was determined to be necessary for the transduction of the apoptotic signal and was designated the "death domain". Other death domain-containing, but otherwise structurally-unrelated, proteins have been identified on the basis of their ability to associate with the cytoplasmic domains of TNFR1 or FAS. FADD (also designated MORT1) and TRADD bind to FAS and TNFR1, respectively. RIP is a death domain-containing serine/threonine kinase that binds to TRADD. RAIDD (also designated CRADD) was identified as a RIP binding protein. Both RAIDD and FADD can associate with members of the caspase family, providing a link between the activation of the TNFRs and the triggering of the cysteine protease cascade. The death domain-containing protein Siva binds to the TNFR family member CD27 and appears to play a role in CD27 mediated apoptosis.

REFERENCES

1. Tartaglia, L.A., et al. 1993. A novel domain within the 55 kd TNF receptor signals cell death. *Cell* 74: 845-853.
2. Itoh, N., et al. 1993. A novel protein domain required for apoptosis. Mutational analysis of human FAS antigen. *J. Biol. Chem.* 268: 10932-10937.
3. Chinnaiyan, A.M., et al. 1995. FADD, a novel death domain-containing protein, interacts with the death domain of FAS and initiates apoptosis. *Cell* 81: 505-512.
4. Park, A., et al. 1996. Systematic mutational analysis of the death domain of the tumor necrosis factor receptor 1-associated protein TRADD. *J. Biol. Chem.* 271: 9858-9862.
5. Hsu, H., et al. 1996. TNF-dependent recruitment of the protein kinase RIP to the TNF receptor-1 signaling complex. *Immunity* 4: 387-396.
6. Cohen, G.M. 1997. Caspases: the executioners of apoptosis. *Biochem. J.* 326: 1-16.
7. Prasad, K.V., et al. 1997. CD27, a member of the tumor necrosis factor receptor family, induces apoptosis and binds to Siva, a proapoptotic protein. *Proc. Natl. Acad. Sci. USA* 94: 6346-6351.

CHROMOSOMAL LOCATION

Genetic locus: Siva (mouse) mapping to 12 F1.

PRODUCT

Siva 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 Siva shRNA Plasmid (m): sc-37386-SH and Siva shRNA (m) Lentiviral Particles: sc-37386-V as alternate gene silencing products.

For independent verification of Siva (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-37386A, sc-37386B and sc-37386C.

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

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

GENE EXPRESSION MONITORING

Siva (F-1): sc-376260 is recommended as a control antibody for monitoring of Siva gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Siva gene expression knockdown using RT-PCR Primer: Siva (m)-PR: sc-37386-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.

PROTOCOLS

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