

# FAF1 siRNA (m): sc-37521

## BACKGROUND

In contrast to growth factors which promote cell proliferation, FAS ligand (FAS-L) and the tumor necrosis factors (TNFs) rapidly induce apoptosis. Cellular response to FAS-L and TNF is mediated by structurally related receptors containing a conserved "death domain" and belonging to the TNF receptor superfamily. TRADD, FADD and RIP are FAS/TNF-RI interacting proteins that contain a death domain homologous region (DDH). TRADD (TNF-RI-associated death domain) and FADD (FAS-associated death domain) associate with the death domains of both FAS and TNF-RI via their DDH regions, while RIP associates exclusively with FAS. An additional FAS interacting protein designated FAF1, for FAS-associated protein factor-1, binds with the cytoplasmic tail of wild type but not lpr mutant FAS. When overexpressed in cells, FAF1 enhances the efficiency of FAS-mediated apoptosis. In contrast to TRADD, FADD and RIP, FAF1 lacks a DDH and cannot induce apoptosis independently of FAS activation.

## REFERENCES

1. Nagata, S., et al. 1995. The Fas death factor. *Science* 267: 1449-1456.
2. Sato, T., et al. 1995. FAP-1: a protein tyrosine phosphatase that associates with Fas. *Science* 268: 411-414.
3. Cleveland, J.L., et al. 1995. Contenders in Fas<sub>L</sub>/TNF death signaling. *Cell* 81: 479-482.
4. Hsu, H., et al. 1995. The TNF receptor 1-associated protein TRADD signals cell death and NF $\kappa$ B activation. *Cell* 81: 495-504.
5. 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.
6. Stanger, B.Z., et al. 1995. RIP: a novel protein containing a death domain that interacts with Fas/APO-1 (CD95) in yeast and causes cell death. *Cell* 81: 513-523.

## CHROMOSOMAL LOCATION

Genetic locus: Faf1 (mouse) mapping to 4 C7.

## PRODUCT

FAF1 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 FAF1 shRNA Plasmid (m): sc-37521-SH and FAF1 shRNA (m) Lentiviral Particles: sc-37521-V as alternate gene silencing products.

For independent verification of FAF1 (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-37521A, sc-37521B and sc-37521C.

## 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

FAF1 siRNA (m) is recommended for the inhibition of FAF1 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.

## GENE EXPRESSION MONITORING

AF1 (E-4): sc-393965 is recommended as a control antibody for monitoring of FAF1 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 FAF1 gene expression knockdown using RT-PCR Primer: FAF1 (m)-PR: sc-37521-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. Peng, H., et al. 2018. Fas-associated protein factor 1 is involved in meiotic resumption in mouse oocytes. *J. Reprod. Dev.* 64: 173-177.

## RESEARCH USE

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