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# TNF $\alpha$ -IP 2 siRNA (m): sc-45827

## BACKGROUND

TNF $\alpha$ -induced protein 2, also known as B94 or TNFAIP2, belongs to the Sec6 family and is differentially expressed in development and capillary tube-like formation *in vitro*. It may play a role as a mediator of inflammation and angiogenesis, and is induced by TNF $\alpha$  and other proinflammatory factors. The B94 gene, originally identified as a tumor necrosis factor  $\alpha$ -inducible gene in endothelial cells, was one of several genes found to be induced by retinoic acid in acute promyelocytic leukemia and other cancers. The TNFAIP2 gene maps to chromosome 14q32 and encodes a 654 amino acid protein.

## REFERENCES

1. Sarma, V., et al. 1992. Cloning of a novel tumor necrosis factor- $\alpha$ -inducible primary response gene that is differentially expressed in development and capillary tube-like formation *in vitro*. *J. Immunol.* 148: 3302-3312.
2. Wolf, F.W., et al. 1994. B94, a primary response gene inducible by tumor necrosis factor- $\alpha$ , is expressed in developing hematopoietic tissues and the sperm acrosome. *J. Biol. Chem.* 269: 3633-3640.
3. Rusiniak, M.E., et al. 2000. Identification of B94 (TNFAIP2) as a potential retinoic acid target gene in acute promyelocytic leukemia. *Cancer Res* 60: 1824-1829.
4. Einstein, M.H., et al. 2002. Utilization of the human genome sequence localizes human papillomavirus type 16 DNA integrated into the TNFAIP2 gene in a fatal cervical cancer from a 39-year-old woman. *Clin. Cancer Res.* 8: 549-554.
5. Park, D.J., et al. 2003. Comparative analysis of genes regulated by PML/RAR  $\alpha$  and PLZF/RAR  $\alpha$  in response to retinoic acid using oligonucleotide arrays. *Blood* 102: 3727-3736.
6. Ma, Y., et al. 2003. Microarray analysis uncovers retinoid targets in human bronchial epithelial cells. *Oncogene* 22: 4924-4932.

## CHROMOSOMAL LOCATION

Genetic locus: Tnfaip2 (mouse) mapping to 12 F1.

## PRODUCT

TNF $\alpha$ -IP 2 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 TNF $\alpha$ -IP 2 shRNA Plasmid (m): sc-45827-SH and TNF $\alpha$ -IP 2 shRNA (m) Lentiviral Particles: sc-45827-V as alternate gene silencing products.

For independent verification of TNF $\alpha$ -IP 2 (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-45827A, sc-45827B and sc-45827C.

## 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

TNF $\alpha$ -IP 2 siRNA (m) is recommended for the inhibition of TNF $\alpha$ -IP 2 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

TNF $\alpha$ -IP 2 (F-6): sc-28318 is recommended as a control antibody for monitoring of TNF $\alpha$ -IP 2 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 TNF $\alpha$ -IP 2 gene expression knockdown using RT-PCR Primer: TNF $\alpha$ -IP 2 (m)-PR: sc-45827-PR (20  $\mu$ 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.