

# POU6F2 siRNA (h): sc-89556

## BACKGROUND

Tissue-restricted POU domain transcription factors play roles in cellular differentiation and the development of several organs. POU6F2 (POU class 6 homeobox 2), also known as RPF-1 (retina-derived POU domain factor 1), WT5 or WTSL, is a 683 amino acid nuclear protein expressed exclusively in the central nervous system (CNS). POU6F2 localizes to neurons of the dorsal hypothalamus, as well as retinal cells, where it is thought to function as a transcription factor during early amacrine and ganglion cell differentiation. Existing as two alternatively spliced isoforms, POU6F2 contains one homeobox DNA-binding domain, a single POU-specific domain, and is encoded by a gene that maps to human chromosome 7p14.1. POU6F2 defects are associated with Wilms tumor 5 (WT5).

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: POU6F2 (human) mapping to 7p14.1.

## PRODUCT

POU6F2 siRNA (h) 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 POU6F2 shRNA Plasmid (h): sc-89556-SH and POU6F2 shRNA (h) Lentiviral Particles: sc-89556-V as alternate gene silencing products.

For independent verification of POU6F2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-89556A, sc-89556B and sc-89556C.

## 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

POU6F2 siRNA (h) is recommended for the inhibition of POU6F2 expression in human 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

POU6F2 (F-7): sc-376709 is recommended as a control antibody for monitoring of POU6F2 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 POU6F2 gene expression knockdown using RT-PCR Primer: POU6F2 (h)-PR: sc-89556-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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.