

## PGBD4 siRNA (h): sc-90040

### BACKGROUND

Initially characterized in the cabbage looper moth, *Trichoplusia ni*, the PGBD (piggyBac transposable element-derived) family is comprised of a group of transposases that are conserved in a wide variety of species, including protozoa and primates. More specifically, while PGBD3 and PGBD4 are primate-specific genes, the other three members of the PGBD family (namely PGBD1, PGBD2 and PGBD5) are conserved among a variety of vertebrates. PGBD4 (piggyBac transposable element derived 4) is a 585 amino acid protein that carries a potentially active catalytic site. PGBD4 is comprised of a single ORF/exon without introns and appears to be derived from the MER75 transposon, which is now represented in the human genome by many internally deleted copies. The gene that encodes PGBD4 maps to human chromosome 15q14.

### REFERENCES

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### CHROMOSOMAL LOCATION

Genetic locus: PGBD4 (human) mapping to 15q14.

### 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.

### PRODUCT

PGBD4 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 PGBD4 shRNA Plasmid (h): sc-90040-SH and PGBD4 shRNA (h) Lentiviral Particles: sc-90040-V as alternate gene silencing products.

For independent verification of PGBD4 (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-90040A, sc-90040B and sc-90040C.

### 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

PGBD4 siRNA (h) is recommended for the inhibition of PGBD4 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.

### RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PGBD4 gene expression knockdown using RT-PCR Primer: PGBD4 (h)-PR: sc-90040-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.