SANTA CRUZ BIOTECHNOLOGY, INC.

# Transcobalamin I siRNA (h): sc-61706

## BACKGROUND

Transcobalamin I (TCI) and Transcobalamin II (TCII) are secreted proteins belonging to the eukaryotic cobalamin transport proteins family and also to the vitamin B12-binding protein family. The genes encoding these proteins map to chromosome 11q12.1 and 22q12.2, respectively. Transcobalamin I is a constituent of secondary granules in neutrophils, while Transcobalamin II binds cobalamin and mediates its transport into cells. These plasma proteins are expressed in various tissues and secretions.

## REFERENCES


1. Kalra, S., et al. 2004. Cobalamin (vitamin B12) binding, phylogeny, and synteny of human transcobalamin. Arch. Biochem. Biophys. 431: 189-196.
2. Cheeramakara, C., et al. 2005. Elevation of serum transcobalamin II in patients with scrub typhus. Southeast. Asian. J. Trop. Med. Public. Health. 36: 113-117.
3. Chen, X., et al. 2005. Influence of cobalamin deficiency compared with that of cobalamin absorption on serum holo-transcobalamin II. Am. J. Clin. Nutr. 81: 110-114.
4. Fedosov, S.N., et al. 2005. Mapping the functional domains of human transcobalamin using monoclonal antibodies. FEBS. J. 272: 3887-3898.
5. Swanson, D.A., et al. 2005. Evaluation of transcobalamin II polymorphisms as neural tube defect risk factors in an Irish population. Birth. Defects. Res. A Clin. Mol. Teratol. 73: 239-244.


## CHROMOSOMAL LOCATION

Genetic locus: TCN1 (human) mapping to 11q12.1.

## PRODUCT

Transcobalamin I 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Transcobalamin I shRNA Plasmid (h): sc-61706-SH and Transcobalamin I shRNA (h) Lentiviral Particles: sc-61706-V as alternate gene silencing products.

For independent verification of Transcobalamin I (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-61706A, sc-61706B and sc-61706C.

## 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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Transcobalamin I siRNA (h) is recommended for the inhibition of Transcobalamin I 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 µM in 66 µl. 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 Transcobalamin I gene expression knockdown using RT-PCR Primer: Transcobalamin I (h)-PR: sc-61706-PR (20 µl). 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.