SANTA CRUZ BIOTECHNOLOGY, INC.

# XTRP3 siRNA (h): sc-61815

## BACKGROUND

The solute carrier (SLC6) family, also known as the neurotransmitter transporter family, is one of the largest transporter families in the human genome comprising 20 members. The Sodium- and chloride-dependent transporter XTRP3, also designated neurotransmitter transporter rB21A homolog is expressed in the medullary layer of the brain, as well as in the kidney, lung, and small intestinal tissues. XTRP3 is a 616-amino acid membrane protein that contains 12 putative transmembrane domains and several glycosylation sites that may play a role in regulating cerebrospinal fluid (CSF) levels of its substrate. XTRP3 may be a candidate for transporter-based therapeutic agents aiding in neurological and psychiatric disorders.

## REFERENCES


1. Smith, K.E., et al. 1995. Molecular cloning of an orphan transporter. A new member of the neurotransmitter transporter family. FEBS Lett. 357: 86-92.
2. Kiss, H., et al. 2002. Comparative human/murine sequence analysis of the common eliminated region 1 from human 3p21.3. Mamm. Genome 13: 646-655.
3. Kowalczuk, S., et al. 2005. Molecular cloning of the mouse IMINO system: an $Na^+$- and $Cl^-$-dependent proline transporter. Biochem. J. 386: 417-422.
4. Takanaga, H., et al. 2005. Identification of mammalian proline transporter SIT1 (SLC6A20) with characteristics of classical system imino. J. Biol. Chem. 280: 8974-8984.
5. Bröer, S. 2006. The SLC6 orphans are forming a family of amino acid transporters. Neurochem. Int. 48: 559-567.
6. Broer, A., et al. 2006. The molecular basis of neutral aminoacidurias. Pflugers Arch. 451: 511-517.


## CHROMOSOMAL LOCATION

Genetic locus: SLC6A20 (human) mapping to 3p21.31.

## PRODUCT

XTRP3 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 XTRP3 shRNA Plasmid (h): sc-61815-SH and XTRP3 shRNA (h) Lentiviral Particles: sc-61815-V as alternate gene silencing products.

For independent verification of XTRP3 (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-61815A, sc-61815B and sc-61815C.

## 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.

## 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

XTRP3 siRNA (h) is recommended for the inhibition of XTRP3 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.

## GENE EXPRESSION MONITORING

XTRP3 (C-11): sc-515119 is recommended as a control antibody for monitoring of XTRP3 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 XTRP3 gene expression knockdown using RT-PCR Primer: XTRP3 (h)-PR: sc-61815-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.