SANTA CRUZ BIOTECHNOLOGY, INC.

CHRFAM7A siRNA (h): sc-105204

BACKGROUND

Chromosome 15 encodes over 700 genes and comprises nearly 3% of the human genome. CHRFAM7A, a fusion protein comprised of FAM7A and AChRα7, is encoded by the CHRFAM7A gene, which is located on a region of human chromosome 15 that is associated with several neuropsychiatric disorders, such as schizophrenia and bipolar affective disorder. CHRFAM7A, also known as D-10 or CHRNA7, is a 412 amino acid multi-pass membrane protein that belongs to the nicotinic acetylcholine receptor (nAChR) subfamily of ligand-gated ion channel proteins, a protein superfamily that mediates signal transmission at synapses. CHRFAM7A is expressed in the hippocampus. Alternative splicing of the CHRFAM7A gene produces two splice variants.

REFERENCES

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4. Dempster, E.L., et al. 2006. Episodic memory performance predicted by the 2 bp deletion in exon 5 of the "α 7-like" nicotinic receptor subunit gene. Am. J. Psychiatry 163: 1832-1834.
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CHROMOSOMAL LOCATION

Genetic locus: CHRFAM7A (human) mapping to 15q13.2.

PRODUCT

CHRFAM7A siRNA (h) is a pool of 2 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 CHRFAM7A shRNA Plasmid (h): sc-105204-SH and CHRFAM7A shRNA (h) Lentiviral Particles: sc-105204-V as alternate gene silencing products.

For independent verification of CHRFAM7A (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-105204A and sc-105204B.

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

CHRFAM7A siRNA (h) is recommended for the inhibition of CHRFAM7A 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 CHRFAM7A gene expression knockdown using RT-PCR Primer: CHRFAM7A (h)-PR: sc-105204-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.