SANTA CRUZ BIOTECHNOLOGY, INC.

ZCCHC12 shRNA (m) Lentiviral Particles: sc-155472-V

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. ZCCHC12 (zinc finger CCHC domain-containing protein 12), also known as SIZN1 (smad-interacting zinc finger protein 1) or SIZN, is a 402 amino acid protein that contains one CCHC-type zinc finger. Expressed predominately in forebrain tissue, ZCCHC12 functions as a transcriptional co-activator that is essential for proper activity of the bone morphogenetic protein (BMP)-signaling pathway. Specifically, ZCCHC12 interacts with Smad1 and CBP and, via these interactions, forms a protein-DNA complex that enhances BMP-induced cholinergic-neuron-specific gene expression. Human ZCCHC12 shares 78% amino acid identity with its mouse counterpart, suggesting a conserved role between species.

REFERENCES

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RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: Zcchc12 (mouse) mapping to X A3.3.

PRODUCT

ZCCHC12 shRNA (m) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x 10^6 infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see ZCCHC12 siRNA (m): sc-155472 and ZCCHC12 shRNA Plasmid (m): sc-155472-SH as alternate gene silencing products.

APPLICATIONS

ZCCHC12 shRNA (m) Lentiviral Particles is recommended for the inhibition of ZCCHC12 expression in mouse cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x 10^6 infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZCCHC12 gene expression knockdown using RT-PCR Primer: ZCCHC12 (m)-PR: sc-155472-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.