SANTA CRUZ BIOTECHNOLOGY, INC.

Tescalcin shRNA (m) Lentiviral Particles: sc-154194-V

BACKGROUND

The EF-hand domain is a 12 amino acid loop motif that is commonly found in proteins that participate in calcium-binding events within the cell. EF-hand domains generally exist in a pair that, together, form a stable four-helix bundle that enables the binding of calcium ions. Tescalcin, also known as TESC, TSC or CHP3, is a 267 amino acid protein that contains one EF-hand domain and is expressed abundantly in adult heart tissue. Using calcium as a cofactor, Tescalcin interacts with NHE-1 and functions to couple the activation of the ERK cascade with the expression of Ets proteins during megakaryocytic differentiation. Human Tescalcin shares 97% sequence identity with its mouse counterpart, suggesting a conserved role between species. Multiple isoforms of Tescalcin exist due to alternative splicing events.

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.

CHROMOSOMAL LOCATION

Genetic locus: Tesc (mouse) mapping to 5 F.

PRODUCT

Tescalcin shRNA (m) Lentiviral Particles are concentrated, transduction-ready viral particles containing a target-specific construct that encodes a 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 Tescalcin siRNA (m): sc-154194 and Tescalcin shRNA Plasmid (m): sc-154194-SH as alternate gene silencing products.

APPLICATIONS

Tescalcin shRNA (m) Lentiviral Particles is recommended for the inhibition of Tescalcin 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 Tescalcin gene expression knockdown using RT-PCR Primer: Tescalcin (m)-PR: sc-154194-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.

PROTOCOLS

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