SANTA CRUZ BIOTECHNOLOGY, INC.

FEZF1 siRNA (m): sc-145162

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The Power to Question

BACKGROUND

Olfactory sensory neurons contain olfactory receptors, which are G protein-coupled receptor proteins that localize to the cilia and display affinity for and bind to a variety of odor molecules. Olfactory neurons send their axons from the olfactory epithelium to the olfactory bulb, which is covered by the CNS basal lamina. FEZF1 (Fez family zinc finger protein 1), also known as Forebrain Embryonic Zinc Finger and Zinc finger protein 312B, is a 475 amino acid nuclear protein that is expressed in the olfactory epithelium and hypothalamus of mice. In FEZF1-deficient mice, axons of olfactory neurons do not reach the olfactory bulb, suggesting that FEXF1 is required for the penetration of olfactory axons though the basal lamina before innervation of the olfactory bulb. When FEZF1 translocates to the nucleus, it induces KRAS overexpression, resulting in activation of ERK-signaling. Overexpression of FEZF1 leads to accelerated proliferation in cultured cells and increased tumor mass in mice. There are three isoforms of FEZF1 that are produced as a result of alternative splicing events.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Fezf1 (mouse) mapping to 6 A3.1.

PRODUCT

FEZF1 siRNA (m) 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 FEZF1 shRNA Plasmid (m): sc-145162-SH and FEZF1 shRNA (m) Lentiviral Particles: sc-145162-V as alternate gene silencing products.

For independent verification of FEZF1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-145162A, sc-145162B and sc-145162C.

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

FEZF1 siRNA (m) is recommended for the inhibition of FEZF1 expression in mouse 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 FEZF1 gene expression knockdown using RT-PCR Primer: FEZF1 (m)-PR: sc-145162-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.