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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

PLEKHG5 siRNA (m): sc-152314

BACKGROUND

PLEKHG5 (Pleckstrin homology domain-containing family G member 5), also known as GEF720 (guanine nucleotide exchange factor 720) or DSMA4, is predominantly expressed in the peripheral nervous system and brain. PLEKHG5 localizes to the cytoplasm, however when cells are stimulated, PLEKHG5 is found near the perinuclear regions. PLEKHG5 contains the highly-conserved DH-PH module which is considered to be the signature motif of the Dbl family of guanine nucleotide exchange factors (GEFs). PLEKHG5 activates the NF κ B signaling pathway and may be involved in the control of neuronal cell differentiation. It has been suggested that mutations in the PLEKHG5 gene may lead to autosomal recessive distal spinal muscular atrophy (DSMA). Four isoforms of PLEKHG5 exists due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Plekhg5 (mouse) mapping to 4 E2.

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.

PRODUCT

PLEKHG5 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PLEKHG5 shRNA Plasmid (m): sc-152314-SH and PLEKHG5 shRNA (m) Lentiviral Particles: sc-152314-V as alternate gene silencing products.

For independent verification of PLEKHG5 (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-152314A, sc-152314B and sc-152314C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PLEKHG5 siRNA (m) is recommended for the inhibition of PLEKHG5 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 μ M in 66 μ l. 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 PLEKHG5 gene expression knockdown using RT-PCR Primer: PLEKHG5 (m)-PR: sc-152314-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.