SANTA CRUZ BIOTECHNOLOGY, INC.

β2-chimaerin siRNA (m): sc-108587

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The Power to Question

BACKGROUND

β-chimaerin, also known as Rho GTPase-activating protein 3 and CHN2, is a 468 amino acid GTPase-activating protein. Localized to the membrane, β-chimaerin inactivates the GTP-hydrolase Rac 1 in a diacylglycerol-dependent manner. As insufficient expression of β-chimaerin leads to higher Rac activity, which directly affects cancer cell-cycle progression and proliferation, β-chimaerin has been implicated in tumor progression. Additionally, β-chimaerin has been identified to play a role in T cell receptor signaling by affecting phorbol ester and SDF-1-regulated T cell responses. Expressed highly in the brain and pancreas, β-chimaerin contains one phorbol-ester/DAG-type zinc finger, a Rho GAP domain and a SH2 domain. Two isoforms of β-chimaerin exist as a result of alternative splicing events.

REFERENCES

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3. Siliceo, M., et al. 2006. β2-chimaerin provides a diacylglycerol-dependent mechanism for regulation of adhesion and chemotaxis of T cells. J. Cell Sci. 119: 141-152.
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6. Bruinsma, S.P. and Baranski, T.J. 2007. β2-chimaerin in cancer signaling: connecting cell adhesion and MAP kinase activation. Cell Cycle 6: 2440-2444.
7. Yasuda, S., et al. 2007. Diacylglycerol kinase γ interacts with and activates β2-chimaerin, a Rac-specific GAP, in response to epidermal growth factor. FEBS Lett. 581: 551-557.
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CHROMOSOMAL LOCATION

Genetic locus: Chn2 (mouse) mapping to 6 B3.

PROTOCOLS

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

PRODUCT

β2-chimaerin siRNA (m) is a target-specific 19-25 nt siRNA 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 β2-chimaerin shRNA Plasmid (m): sc-108587-SH and β2-chimaerin shRNA (m) Lentiviral Particles: sc-108587-V as alternate gene silencing products.

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

β2-chimaerin siRNA (m) is recommended for the inhibition of β2-chimaerin 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 β2-chimaerin gene expression knockdown using RT-PCR Primer: β2-chimaerin (m)-PR: sc-108587-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.