

▶ TRIM9 siRNA (h): sc-92385

BACKGROUND

The tripartite motif (TRIM) family of proteins are characterized by a conserved TRIM domain that includes a coiled-coil region, a B-box type zinc finger, one RING finger and three zinc-binding domains. TRIM9 (tripartite motif-containing protein 9), also known as RNF91 (RING finger protein 91), is a 710 amino acid protein that contains a variety of domains that are characteristic to TRIM proteins, including a RING-type zinc finger and 2 B box-type zinc fingers, as well as a Fibronectin type-III domain, a COS domain and a B30.2/SPRY domain. TRIM9 utilizes its coiled coil domain to mediate the interaction with the amino-terminal t-SNARE domain of SNAP 25. In this manner, TRIM9 acts as a regulator of synaptic vesicle exocytosis by controlling the availability of SNAP 25 for the formation of the SNARE complex. There are three isoforms of TRIM9 that are produced as a result of alternative splicing events.

REFERENCES

1. Reymond, A., et al. 2001. The tripartite motif family identifies cell compartments. *EMBO J.* 20: 2140-2151.
2. Berti, C., et al. 2002. TRIM9 is specifically expressed in the embryonic and adult nervous system. *Mech. Dev.* 113: 159-162.
3. Lucas, B., et al. 2005. HNF-4 α reduces proliferation of kidney cells and affects genes deregulated in renal cell carcinoma. *Oncogene* 24: 6418-6431.
4. Short, K.M. and Cox, T.C. 2006. Subclassification of the RBCC/TRIM superfamily reveals a novel motif necessary for microtubule binding. *J. Biol. Chem.* 281: 8970-8980.
5. Dhingra, V., et al. 2007. Proteomic profiling reveals that rabies virus infection results in differential expression of host proteins involved in ion homeostasis and synaptic physiology in the central nervous system. *J. Neurovirol.* 13: 107-117.
6. Fu, Z.F., et al. 2008. Pathogenic rabies virus alters host protein expression in the central nervous system: implications for neuronal dysfunction. *Dev. Biol.* 131: 83-91.
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CHROMOSOMAL LOCATION

Genetic locus: TRIM9 (human) mapping to 14q22.1.

PRODUCT

TRIM9 siRNA (h) 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 TRIM9 shRNA Plasmid (h): sc-92385-SH and TRIM9 shRNA (h) Lentiviral Particles: sc-92385-V as alternate gene silencing products.

For independent verification of TRIM9 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-92385A, sc-92385B and sc-92385C.

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

TRIM9 siRNA (h) is recommended for the inhibition of TRIM9 expression in human 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.

GENE EXPRESSION MONITORING

TRIM9 (G-4): sc-515007 is recommended as a control antibody for monitoring of TRIM9 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TRIM9 gene expression knockdown using RT-PCR Primer: TRIM9 (h)-PR: sc-92385-PR (20 μ l). 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.

PROTOCOLS

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