

MVB12B siRNA (m): sc-145024

BACKGROUND

MVB12B (multivesicular body subunit 12B), also known as C9orf28 or FAM125B, is a 319 amino acid peripheral membrane protein. Belonging to the MVB12 family, MVB12B contains one MABP domain and a UMA domain. MVB12B is a component of the ESCRT-1 complex (endosomal sorting complex required for transport I), which functions in the regulation of vesicular trafficking processes. The ESCRT-1 complex, which is composed of tsg 101, VPS28, a VPS37A-D and MVB12A or MVB12B, participates in the sorting from the plasma membrane to the endosomal vesicle of ubiquitinated cargo proteins, and plays a role in HIV budding and endosomal protein sorting. MVB12B is required for recruitment of endocytic ubiquitinated cargos into multivesicular bodies. Existing as two alternatively spliced isoforms, MVB12B is encoded by a gene that maps to human chromosome 9q33.3 and mouse chromosome 2 B.

REFERENCES

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3. Morita, E., Sandrin, V., Alam, S.L., Eckert, D.M., Gygi, S.P. and Sundquist, W.I. 2007. Identification of human MVB12 proteins as ESCRT-I subunits that function in HIV budding. *Cell Host Microbe* 2: 41-53.
4. Tsunematsu, T., Yamauchi, E., Shibata, H., Maki, M., Ohta, T. and Konishi, H. 2010. Distinct functions of human MVB12A and MVB12B in the ESCRT-I dependent on their posttranslational modifications. *Biochem. Biophys. Res. Commun.* 399: 232-237.
5. Boura, E. and Hurley, J.H. 2012. Structural basis for membrane targeting by the MVB12-associated β -prism domain of the human ESCRT-I MVB12 subunit. *Proc. Natl. Acad. Sci. USA* 109: 1901-1906.

CHROMOSOMAL LOCATION

Genetic locus: Fam125b (mouse) mapping to 2 B.

PRODUCT

MVB12B 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MVB12B shRNA Plasmid (m): sc-145024-SH and MVB12B shRNA (m) Lentiviral Particles: sc-145024-V as alternate gene silencing products.

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.

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

MVB12B siRNA (m) is recommended for the inhibition of MVB12B 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 MVB12B gene expression knockdown using RT-PCR Primer: MVB12B (m)-PR: sc-145024-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.