SANTA CRUZ BIOTECHNOLOGY, INC.

SLM-2 siRNA (h): sc-40922

BACKGROUND

Sam 68 is phosphorylated on tyrosine and functions as a substrate for Src family tyrosine kinases during mitosis. Sam 68 also associates with several SH2 and SH3 domain-containing signaling proteins, such as GRB2 and PLC γ1. Originally cloned as Ras GAP-associated p62, further investigations have shown that Sam 68 and Ras GAP-associated p62 are not antigenically related, nor are they encoded by the same gene. Like Sam 68, the Sam 68-like mammalian proteins, SLM-1 and SLM-2, demonstrate RNA binding activity. Also like Sam 68, SLM-1 is tyrosine phosphorylated and functions as an adapter protein for signaling molecules, including GRB2, PLC γ1, Fyn and RasGAP. SLM-2 is not tyrosine phosphorylated, nor does it appear to associate with GRB2, PLC γ1, Fyn or RasGAP, indicating that SLM-2 may not be an adapter protein for these proteins.

REFERENCES

1. Fumagalli, S., et al. 1994. A target for Src in mitosis. Nature 368: 871-874.
2. Maa, M.C., et al. 1994. A protein that is highly related to GTPase-activating protein-associated p62 complexes with phospholipase C γ. Mol. Cell. Biol. 14: 5466-5473.
3. Richard, S., et al. 1995. Association of p62, a multifunctional SH2- and SH3-domain-binding protein, with Src family tyrosine kinases, GRB2, and phospholipase C γ-1. Mol. Cell. Biol. 15: 186-197.
4. Lock, P., et al. 1996. The human p62 cDNA encodes Sam68 and not the RasGAP-associated p62 protein. Cell 84: 23-24.
5. Guitard, E., et al. 1998. Sam68 is a Ras-GAP-associated protein in mitosis. Biochem. Biophys. Res. Commun. 245: 562-566.
6. Di Fruscio, M., et al. 1999. Characterization of Sam 68-like mammalian proteins SLM-1 and SLM-2: SLM-1 is a Src substrate during mitosis. Proc. Natl. Acad. Sci. USA 96: 2710-2715.

CHROMOSOMAL LOCATION

Genetic locus: KHDRBS3 (human) mapping to 8q24.23.

PRODUCT

SLM-2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLM-2 shRNA Plasmid (h): sc-40922-SH and SLM-2 shRNA (h) Lentiviral Particles: sc-40922-V as alternate gene silencing products.

For independent verification of SLM-2 (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-40922A, sc-40922B and sc-40922C.

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 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

SLM-2 siRNA (h) is recommended for the inhibition of SLM-2 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 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.

GENE EXPRESSION MONITORING

SLM-2 (F-3): sc-374461 is recommended as a control antibody for monitoring of SLM-2 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 SLM-2 gene expression knockdown using RT-PCR Primer: SLM-2 (h)-PR: sc-40922-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Bougras-Cartron, G., et al. 2023. Adenosine methylation level of miR-125a-5p promotes anti-PD-1 therapy escape through the regulation of IGSF11/VSIG3 expression. Cancers 15: 3188.

RESEARCH USE

For research use only, not for use in diagnostic procedures.