SANTA CRUZ BIOTECHNOLOGY, INC.

BAIAP2L2 siRNA (m): sc-141467

BACKGROUND

The Src homology 3 (SH3) domain is a highly conserved 60 amino acid protein domain that is organized into a β-barrel fold consisting of 5 or 6 β strands arranged as 2 tightly packed anti-parallel β sheets. This domain is found in proteins that mediate assembly of specific protein complexes and interact with other proteins, specifically recognizing proline-rich regions. BAIAP2L2 (brain-specific angiogenesis inhibitor 1-associated protein 2-like protein 2) is a 529 amino acid protein containing an SH3 domain, suggesting that it may function as an adaptor protein. BAIAP2L2 also contains an IMD (IRSp53/MIM) domain, which enables the protein to bind to and bundle Actin filaments, as well as bind to membranes and interact with Rac GTPase. There are two named isoforms of BAIAP2L2 which are produced as a result of alternative splicing events.

REFERENCES

1. Oda, K., et al. 1999. Identification of BAIAP2 (BAI-associated protein 2), a novel human homologue of hamster IRSp53, whose SH3 domain interacts with the cytoplasmic domain of BAI1. Cytogenet. Cell Genet. 84: 75-82.
2. Dunham, I., et al. 1999. The DNA sequence of human chromosome 22. Nature 402: 489-495.
3. Clark, H.F., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. Genome Res. 13: 2265-2270.
4. Funato, Y., et al. 2004. IRSp53/Eps8 complex is important for positive regulation of Rac and cancer cell motility/invasiveness. Cancer Res. 64: 5237-5244.
5. Millard, T.H., et al. 2005. Structural basis of filopodia formation induced by the IRSp53/MIM homology domain of human IRSp53. EMBO J. 24: 240-250.
6. Kudo, S., et al. 2007. Inhibition of tumor growth through suppression of angiogenesis by brain-specific angiogenesis inhibitor 1 gene transfer in murine renal cell carcinoma. Oncol. Rep. 18: 785-791.
7. Ren, S., et al. 2008. The conservation pattern of short linear motifs is highly correlated with the function of interacting protein domains. BMC Genomics 9: 452.

CHROMOSOMAL LOCATION

Genetic locus: Baiap2l2 (mouse) mapping to 15 E1.

PRODUCT

BAIAP2L2 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. Suit-able for 50-100 transfections. Also see BAIAP2L2 shRNA Plasmid (m): sc-141467-SH and BAIAP2L2 shRNA (m) Lentiviral Particles: sc-141467-V as alternate gene silencing products.

RESEARCH USE

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

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

BAIAP2L2 siRNA (m) is recommended for the inhibition of BAIAP2L2 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.

GENE EXPRESSION MONITORING

BAIAP2L2 (C-9): sc-377396 is recommended as a control antibody for monitoring of BAIAP2L2 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 BAIAP2L2 gene expression knockdown using RT-PCR Primer: BAIAP2L2 (m)-PR: sc-141467-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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