SANTA CRUZ BIOTECHNOLOGY, INC.

BAIAP2L1 siRNA (m): sc-105115

BACKGROUND

BAIAP2L1 (brain-specific angiogenesis inhibitor 1-associated protein 2-like 1), also known as IRTKS (insulin receptor tyrosine kinase substrate), is a widely expressed, 511 amino acid protein with predominant expression in liver, testis, bladder, lung and heart. It contains one IMD (IRSp53/MTSS1 homology) domain, one SH3 domain and a C-terminal region that is similar to a WH2 domain. Other proteins containing the IMD domain, such as IRSp53 and MTSS1, are known to participate in actin filament bundling and induction of filopodia-like protrusions. BAIAP2L1 is closely related to IRSp53 but, unlike the filopodia-like protrusions caused by IRSp53, expression of BAIAP2L1 results in short actin clusters around the peripherary of the cell. Similar to IRSp53, BAIAP2L1 is a substrate for the Insulin receptor (Insulin R) and undergoes tyrosine phosphorylation upon stimulation with Insulin. In addition, BAIAP2L1 is capable of binding Rac via its N-terminal IMD domain.

REFERENCES

1. Yeh, T.C., et al. 1996. Characterization and cloning of a 58/53-kDa substrate of the Insulin receptor tyrosine kinase. J. Biol. Chem. 271: 2921-2928.
2. 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.
3. Disanza, A., et al. 2006. Regulation of cell shape by Cdc42 is mediated by the synergic actin-bundling activity of the Eps8-IRSp53 complex. Nat. Cell Biol. 8: 1337-1347.
4. Suetsugu, S., et al. 2006. The RAC binding domain/IRSp53-MIM homology domain of IRSp53 induces RAC-dependent membrane deformation. J. Biol. Chem. 281: 35347-35358.
5. Galligan, C.L., et al. 2007. Distinctive gene expression signatures in rheumatoid arthritis synovial tissue fibroblast cells: correlates with disease activity. Genes Immun. 8: 480-491.

CHROMOSOMAL LOCATION

Genetic locus: Baiap2l1 (mouse) mapping to 5 G2.

PRODUCT

BAIAP2L1 siRNA (m) 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 BAIAP2L1 shRNA Plasmid (m): sc-105115-SH and BAIAP2L1 shRNA (m) Lentiviral Particles: sc-105115-V as alternate gene silencing products.

For independent verification of BAIAP2L1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-105115A, sc-105115B and sc-105115C.

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

BAIAP2L1 siRNA (m) is recommended for the inhibition of BAIAP2L1 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

BAIAP2L1 (F-9): sc-393838 is recommended as a control antibody for monitoring of BAIAP2L1 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 BAIAP2L1 gene expression knockdown using RT-PCR Primer: BAIAP2L1 (m)-PR: sc-105115-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.