SANTA CRUZ BIOTECHNOLOGY, INC.

BAI-3 siRNA (m): sc-45213

BACKGROUND

Brain-specific angiogenesis inhibitors, including BAI-1, BAI-2 and BAI-3, are integral membrane proteins belonging to the G protein-coupled receptor 2 family. In addition to inhibiting angiogenesis in the brain, BAI proteins are also expressed in the heart, thymus, skeletal muscle and a variety of cell lines. BAI-3 is predominantly expressed in brain. Reduced expression may be observed in some glioblastoma cell lines suggesting, that BAI-3 may function in the suppression of glioblastoma. Localization of BAI-3 in most neurons of the cerebral cortex is analogous with BAI-1 and BAI-2 expression in the adult brain, but varies in the developing brain. The activity of brain-specific angiogenesis inhibitor proteins has been inversely correlated with vascularization in some cancer tissues. BAI-3 activity may be significant in the early phases of ishemia-induced brain angiogenesis and in brain tumor progression. A better understanding of the anti-angiogenic activity of these BAIs may offer potential therapeutic benefits.

REFERENCES

1. Nishimori, H., et al. 1997. A novel brain-specific p53-target gene, BAI-1, containing thrombospondin type 1 repeats inhibits experimental angiogenesis. Oncogene 15: 2145-2150.
2. Shiratsuchi, T., et al. 1998. Cloning and characterization of BAI-associated protein 1: a PDZ domain-containing protein that interacts with BAI-1. Biochemistry 247: 597-604.
3. Kee, H.J., et al. 2002. Expression of brain-specific angiogenesis inhibitor 2 (BAI-2) in normal and ischemic brain: involvement of BAI-2 in the ischemia-induced brain. J. Cereb. Blood Flow Metab. 22: 1054-1067.
4. Kaur, B., et al. 2003. Brain angiogenesis inhibitor 1 is differentially expressed in normal brain and glioblastoma independently of p53 expression. Am. J. Pathol. 162: 19-27.
5. Kee, H.J., et al. 2004. Expression of brain-specific angiogenesis inhibitor 3 (BAI-3) in normal brain and implications for BAI-3 in ischemia-induced brain angiogenesis and malignant glioma. FEBS Lett. 569: 307-316.
6. SWISS-PROT/TrEMBL (O60242). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: Bai3 (mouse) mapping to 1 A5.

PRODUCT

BAI-3 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 BAI-3 shRNA Plasmid (m): sc-45213-SH and BAI-3 shRNA (m) Lentiviral Particles: sc-45213-V as alternate gene silencing products.

For independent verification of BAI-3 (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-45213A, sc-45213B and sc-45213C.

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

BAI-3 siRNA (m) is recommended for the inhibition of BAI-3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor BAI-3 gene expression knockdown using RT-PCR Primer: BAI-3 (m)-PR: sc-45213-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.

PROTOCOLS

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