SANTA CRUZ BIOTECHNOLOGY, INC.

BAI-1 (T-20): sc-33461

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-1 protein is specifically expressed in the brain and found to localize to the cytoplasm and membrane in neuronal cells of the cerebral cortex. Reduced expression of BAI-1 in some glioblastoma cell lines and cancer tissues implicates the functional role of BAI-1 as an inhibitor of angiogenesis. The exact mechanisms underlying BAI-1 anti-angiogenetic activity are still being investigated. BAI-1 may be involved in mediating the p53 signal in suppression of glioblastoma, as well as in cell adhesion and signal transduction. Additional research shows an inverse correlation with vascularization and BAI-1 expression in both colorectal carcinomas and pulmonary adenocarcinomas.

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. Fukushima, Y., et al. 1998. Brain-specific angiogenesis inhibitor 1 expression is inversely correlated with vascularity and distant metastasis of colorectal cancer. Int. J. Oncol. 13: 967-970.
4. Hatanaka, H., et al. 2000. Vascularization is decreased in pulmonary adenocarcinoma expressing brain-specific angiogenesis inhibitor 1 (BAI-1). Int. J. Mol. Med. 5: 181-183.
5. Mori, K., et al. 2002. Brain-specific angiogenesis inhibitor 1 (BAI-1) is expressed in human cerebral neuronal cells. Neurosci. Res. 43: 69-74.
6. Duda, D.G., et al. 2002. Overexpression of the p53-inducible brain-specific angiogenesis inhibitor 1 suppresses efficiently tumour angiogenesis. Br. J. Cancer 86: 490-496.
7. Koh, J.T., et al. 2004. Extracellular fragment of brain-specific angiogenesis inhibitor 1 suppresses endothelial cell proliferation by blocking $\alpha v\beta 5$ integrin. Exp. Cell Res. 294: 172-184.

CHROMOSOMAL LOCATION

Genetic locus: BAI1 (human) mapping to 8q24.3; Bai1 (mouse) mapping to 15 D3.

SOURCE

BAI-1 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of BAI-1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33461 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BAI-1 (T-20) is recommended for detection of BAI-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BAI-1 (T-20) is also recommended for detection of BAI-1 in additional species, including bovine.

Suitable for use as control antibody for BAI-1 siRNA (h): sc-45208, BAI-1 siRNA (m): sc-45209, BAI-1 shRNA Plasmid (h): sc-45208-SH, BAI-1 shRNA Plasmid (m): sc-45209-SH, BAI-1 shRNA (h) Lentiviral Particles: sc-45208-V and BAI-1 shRNA (m) Lentiviral Particles: sc-45209-V.

Molecular Weight of BAI-1: 174 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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