

BAI-1 (H-270): sc-66815

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-angiogenic 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.

CHROMOSOMAL LOCATION

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

SOURCE

BAI-1 (H-270) is a rabbit polyclonal antibody raised against amino acids 81-350 mapping within an N-terminal extracellular domain of BAI-1 of human origin.

PRODUCT

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

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.

APPLICATIONS

BAI-1 (H-270) 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), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BAI-1 (H-270) 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.

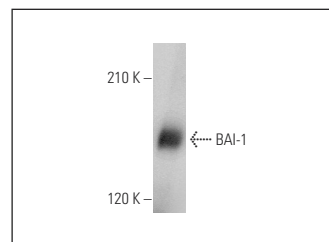
Molecular Weight of BAI-1: 174 kDa.

Positive Controls: mouse heart extract: sc-2254.

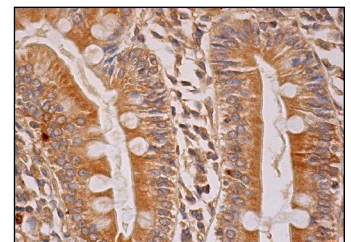
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



BAI-1 (H-270): sc-66815. Western blot analysis of BAI-1 expression in mouse heart tissue extract.



BAI-1 (H-270): sc-66815. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Kaur, B., et al. 2009. Vasculostatin inhibits intracranial glioma growth and negatively regulates *in vivo* angiogenesis through a CD36-dependent mechanism. *Cancer Res.* 69: 1212-1220.

RESEARCH USE

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