

SIAH-1 (P-18): sc-5506

BACKGROUND

SIAH, the human homologue of the *Drosophila* seven in absentia (sina) gene, is a tumor suppressor protein that is expressed in intestinal epithelium and activated during apoptosis. Human SIAH proteins are produced as two distinct gene products, SIAH-1, and a slightly larger protein SIAH-2, which share a highly conserved C-terminal sequence and differ in their N-terminal regions. SIAH-1 contains an N-terminal RING-finger domain, which is required for proteolysis, and a cystein-rich C-terminal domain, which regulates oligomerization and SIAH binding to target proteins. As a tumor suppressor, SIAH-1 binds DCC (deleted in colorectal cancer) and regulates DCC degradation via the ubiquitin-proteasome pathway. SIAH-1 also binds a Bcl-2 related protein, Bag-1, thereby inhibiting cell growth. The majority of SIAH-1 is localized to the nucleus, however a small percentage is detected in the cytoplasm. This nuclear localization suggests that SIAH proteins may interact with other nuclear matrix proteins and DNA.

CHROMOSOMAL LOCATION

Genetic locus: SIAH1 (human) mapping to 16q12.1; Siah1a (mouse) mapping to 8 C3.

SOURCE

SIAH-1 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SIAH-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.

Blocking peptide available for competition studies, sc-5504 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SIAH-1 (P-18) is recommended for detection of SIAH-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).

SIAH-1 (P-18) is also recommended for detection of SIAH-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SIAH-1 siRNA (h): sc-37495, SIAH-1 siRNA (m): sc-37496, SIAH-1 shRNA Plasmid (h): sc-37495-SH, SIAH-1 shRNA Plasmid (m): sc-37496-SH, SIAH-1 shRNA (h) Lentiviral Particles: sc-37495-V and SIAH-1 shRNA (m) Lentiviral Particles: sc-37496-V.

Molecular Weight of SIAH-1: 32 kDa.

Positive Controls: Ramos cell lysate: sc-2216, K-562 whole cell lysate: sc-2203 or human placenta extract: sc-363772.

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.

SELECT PRODUCT CITATIONS

- Davies, G.C., et al. 2004. Cbl-β interacts with ubiquitinated proteins; differential functions of the UBA domains of c-Cbl and Cbl-β. *Oncogene* 23: 7104-7115.
- Krämer, O.H., et al. 2008. Mechanism for ubiquitylation of the leukemia fusion proteins AML1-ETO and PML-RARα. *FASEB J.* 22: 1369-1379.
- Xie, W., et al. 2009. E2F1 represses β-catenin/TCF activity by direct up-regulation of Siah1. *J. Cell. Mol. Med.* 13: 1719-1727.
- Buchwald, M., et al. 2010. Ubiquitin conjugase UBCH8 targets active FMS-like tyrosine kinase 3 for proteasomal degradation. *Leukemia* 24: 1412-1421.
- Rampias, T., et al. 2010. Activation of Wnt signaling pathway by human papillomavirus E6 and E7 oncogenes in HPV16-positive oropharyngeal squamous carcinoma cells. *Mol. Cancer Res.* 8: 433-443.
- Pietschmann, K., et al. 2012. Differential regulation of PML-RARα stability by the ubiquitin ligases SIAH1/SIAH2 and TRIAD1. *Int. J. Biochem. Cell Biol.* 44: 132-138.
- Buchwald, M., et al. 2012. SIAH ubiquitin ligases target the nonreceptor tyrosine kinase ACK1 for ubiquitylation and proteasomal degradation. *Oncogene*. E-published.

RESEARCH USE

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

PROTOCOLS

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



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Try **SIAH-1/2 (4B4B6): sc-81786** or **SIAH-1/2 (8G7H12): sc-81785**, our highly recommended monoclonal alternatives to SIAH-1 (P-18).