SANTA CRUZ BIOTECHNOLOGY, INC.

# SIAH-1/2 (8G7H12): sc-81785

## BACKGROUND

SIAH, the human homolog 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 the slightly larger protein SIAH-2, which share a highly conserved C-terminal sequence and differ in their N-terminal regions. SIAH-1 is a protein that 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.

## REFERENCES


1. Nemani, M., et al. 1996. Activation of the human homologue of the *Drosophila* sina gene in apoptosis and tumor suppression. Proc. Natl. Acad. Sci. USA 93: 9039-9042.
2. Hu, G., et al. 1997. Characterization of human homologs for the *Drosophila* seven in absentia (sina) gene. Genomics 46: 103-111.
3. Hu, G., et al. 1997. Mammalian homologs of seven in absentia regulate DCC via the ubiquitin-proteasome pathway. Genes Dev. 11: 2701-2714.
4. Matsuzawas, S., et al. 1998. P53-inducible human homologue of *Drosophila* seven in absentia (SIAH) inhibits cell growth: suppression by Bag-1. EMBO J. 17: 2736-2747.
5. Hu, G., et al. 1999. SIAH-1 N-terminal RING domain is required for proteolysis function, and C-terminal sequence regulate oligomerization and binding to target proteins. Mol. Cell. Biol. 19: 724-732.
6. Roperch, J., et al. 1999. SIAH-1 promotes apoptosis and tumor suppression through a network involving the regulation of protein folding, unfolding, and trafficking: Identification of common effectors with p53 and $p21^{WAF1}$. Proc. Natl. Acad. Sci. USA 96: 8070-8073.
7. Bruzzoni-Giovanelli, H., et al. 1999. SIAH-1 inhibits cell growth by altering the mitotic process. Oncogene 18: 7101-7109.
8. Imaoka, S., et al. 2007. Isolation of *Xenopus* HIF-prolyl 4-hydroxylase and rescue of a small-eye phenotype caused by SIAH-2 over-expression. Biochem. Biophys. Res. Commun. 355: 419-425.


## SOURCE

SIAH-1/2 (8G7H12) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to a region near the C-terminus of SIAH of *Drosophila melanogaster* origin.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg $IgG_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SIAH-1/2 (8G7H12) is available conjugated to agarose (sc-81785 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-81785 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-81785 PE), fluorescein (sc-81785 FITC), Alexa Fluor® 488 (sc-81785 AF488), Alexa Fluor® 546 (sc-81785 AF546), Alexa Fluor® 594 (sc-81785 AF594) or Alexa Fluor® 647 (sc-81785 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-81785 AF680) or Alexa Fluor® 790 (sc-81785 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.



## APPLICATIONS

SIAH-1/2 (8G7H12) is recommended for detection of SIAH-1 and SIAH-2 of mouse, rat, human and *Drosophila melanogaster* 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

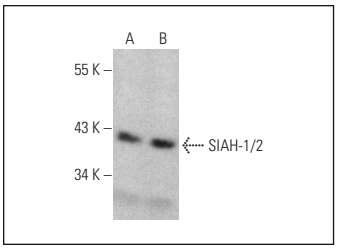
SIAH-1/2 (8G7H12) is also recommended for detection of SIAH-1 and SIAH-2 in additional species, including porcine.

Suitable for use as control antibody for SIAH-1/2 siRNA (h): sc-44102, SIAH-1/2 shRNA Plasmid (h): sc-44102-SH and SIAH-1/2 shRNA (h) Lentiviral Particles: sc-44102-V.

Molecular Weight of SIAH-1/2: 32 kDa.

Positive Controls: HISM cell lysate: sc-2229, F9 cell lysate: sc-2245 or NIH/3T3 whole cell lysate: sc-2210.

## DATA




SIAH-1/2 (8G7H12): sc-81785. Western blot analysis of SIAH-1/2 expression in NIH/3T3 (**A**) and F9 (**B**) whole cell lysates.

## 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.