

SIAH-2 (N-14): sc-5507

BACKGROUND

SIAH-2 (seven in absentia homolog 2) is an E3 ligase that catalyzes ubiquitination and proteasome-mediated degradation of protein substrates. SIAH-2 encodes a 324 amino acid protein that shares 77% identity with human SIAH-1 and 68% identity with the *Drosophila* *sina* (7 in absentia) gene, on which development of the *Drosophila* R7 photoreceptor is dependent. SIAH-2 targets TRAF2 (which regulates cell responses to stress and cytokines through the regulation of key stress-signaling cascades) for degradation under stress conditions such as hypoxia. It targets HIF-1 α prolyl hydroxylase 3 (PHD3) for degradation upon exposure to hypoxic conditions, which coincides with an increase in SIAH-2 transcription. SIAH-2 can decrease TNF- α -dependent induction of JNK activity and transcriptional activation of NF κ B. SIAH-2 null mice subjected to hypoxia display an impaired respiratory response and reduced levels of hemoglobin.

CHROMOSOMAL LOCATION

Genetic locus: SIAH2 (human) mapping to 3q25.1; Siah2 (mouse) mapping to 3 D.

SOURCE

SIAH-2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SIAH-2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-5507 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SIAH-2 (N-14) is recommended for detection of SIAH-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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-2 (N-14) is also recommended for detection of SIAH-2 in additional species, including bovine and porcine.

Suitable for use as control antibody for SIAH-2 siRNA (h): sc-37497, SIAH-2 siRNA (m): sc-37498, SIAH-2 shRNA Plasmid (h): sc-37497-SH, SIAH-2 shRNA Plasmid (m): sc-37498-SH, SIAH-2 shRNA (h) Lentiviral Particles: sc-37497-V and SIAH-2 shRNA (m) Lentiviral Particles: sc-37498-V.

Molecular Weight of SIAH-2: 40 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or Ramos + IL-4 cell lysate: sc-24762.

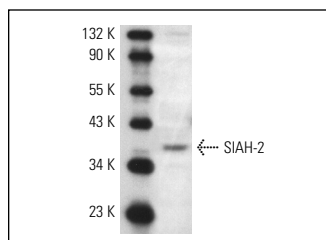
STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

DATA



SIAH-2 (N-14): sc-5507. Western blot analysis of SIAH-2 expression in IL-4-treated Ramos whole cell lysate.

SELECT PRODUCT CITATIONS

1. Frasor, J., et al. 2005. Estrogen down-regulation of the corepressor N-CoR: mechanism and implications for estrogen derepression of N-CoR-regulated genes. *Proc. Natl. Acad. Sci. USA* 102: 13153-13157.
2. Szargel, R., et al. 2009. Synphilin-1A inhibits seven in absentia homolog (SIAH) and modulates α -synuclein monoubiquitylation and inclusion formation. *J. Biol. Chem.* 284: 11706-11716.
3. Swat, A., et al. 2009. Cell density-dependent inhibition of epidermal growth factor receptor signaling by p38 α mitogen-activated protein kinase via Sprouty2 downregulation. *Mol. Cell. Biol.* 29: 3332-3343.
4. Buchwald, M., et al. 2010. Ubiquitin conjugase UBCH8 targets active FMS-like tyrosine kinase 3 for proteasomal degradation. *Leukemia* 24: 1412-1421.
5. He, H.T., et al. 2010. Siah1 proteins enhance radiosensitivity of human breast cancer cells. *BMC Cancer* 10: 403.
6. Pietschmann, K., et al. 2012. Differential regulation of PML-RAR α stability by the ubiquitin ligases SIAH1/SIAH2 and TRIAD1. *Int. J. Biochem. Cell Biol.* 44: 132-138.
7. Sarkar, T.R., et al. 2012. Identification of a Src tyrosine kinase/SIAH2 E3 ubiquitin ligase pathway that regulates C/EBP δ expression and contributes to transformation of breast tumor cells. *Mol. Cell. Biol.* 32: 320-332.
8. Buchwald, M., et al. 2012. SIAH ubiquitin ligases target the nonreceptor tyrosine kinase ACK1 for ubiquitylation and proteasomal degradation. *Oncogene* 32: 4913-4920.


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Try **SIAH-2 (22B9B5): sc-81788**, our highly recommended monoclonal alternative to SIAH-2 (N-14).