SANTA CRUZ BIOTECHNOLOGY, INC.

SIAH-2 (G-16): sc-5508

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-1α 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 NFκB. 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 (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SIAH-2 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.4

Blocking peptide available for competition studies, sc-5508 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SIAH-2 (G-16) 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 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 sections) (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 (G-16) is also recommended for detection of SIAH-2 in additional species, including equine, canine, bovine, porcine and avian.

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.

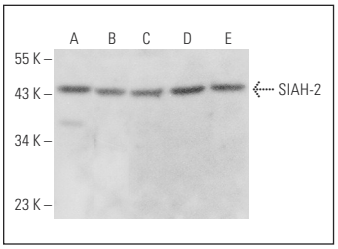
Molecular Weight of SIAH-2: 40 kDa.

Positive Controls: Ramos cell lysate: sc-2216, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

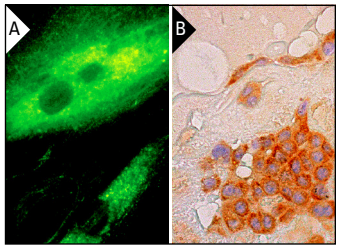
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



SIAH-2 (G-16): sc-5508. Western blot analysis of SIAH-2 expression in Ramos (**A**), HISM (**B**), IMR-32 (**C**), Jurkat (**D**) and K-562 (**E**) whole cell lysates.



SIAH-2 (G-16): sc-5508. Immunofluorescence staining of methanol-fixed HISM cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells (**B**).

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.