SANTA CRUZ BIOTECHNOLOGY, INC.

FIH-1 (N-18): sc-26219

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Factor inhibiting HIF-1 (FIH-1) exists as a homodimer and binds to HIF-1α. Specifically, FIH-1 operates as an asparaginyl hydroxylase. FIH-1 catalyzes the hydroxylation of the β-carbon of asparagine residue 803 within the C-terminal transactivation domain of HIF-1α. This hydroxylation event blocks the association of HIF-1α with coactivators. FIH-1 also binds to von Hippel-Lindau (VHL) tumor suppressor protein, which represses transcriptional activity of HIF-1α. In transiently transfected human osteosarcoma cells, FIH-1 localizes to the cytoplasm. The structure of FIH-1 includes a jellyroll-like β-barrel containing ferrous-binding triad residues. The gene encoding human FIH-1 maps to chromosome 10q24.31.

CHROMOSOMAL LOCATION

Genetic locus: HIF1AN (human) mapping to 10q24.31; Hif1an (mouse) mapping to 19 C3.

SOURCE

FIH-1 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of FIH-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-26219 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.

RESEARCH USE

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

APPLICATIONS

FIH-1 (N-18) is recommended for detection of FIH-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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FIH-1 (N-18) is also recommended for detection of FIH-1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for FIH-1 siRNA (h): sc-37885, FIH-1 siRNA (m): sc-37886, FIH-1 shRNA Plasmid (h): sc-37885-SH, FIH-1 shRNA Plasmid (m): sc-37886-SH, FIH-1 shRNA (h) Lentiviral Particles: sc-37885-V and FIH-1 shRNA (m) Lentiviral Particles: sc-37886-V.

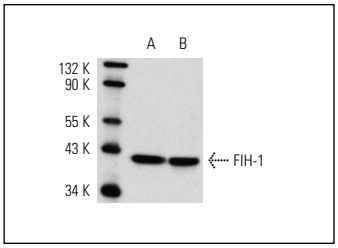
Molecular Weight of FIH-1: 40 kDa.

Positive Controls: FIH-1 (h): 293T Lysate: sc-159159, Sol8 nuclear extract: sc-2157 or rat skeletal muscle xtract: 364810.

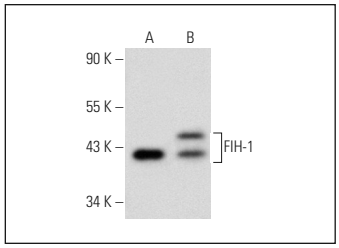
RECOMMENDED SECONDARY REAGENTS

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.

DATA



FIH-1 (N-18): sc-26219. Western blot analysis of FIH-1 expression in Sol8 nuclear extract (**A**) and rat skeletal muscle tissue extract (**B**).



FIH-1 (N-18): sc-26219. Western blot analysis of FIH-1 expression in non-transfected: sc-117752 (**A**) and human FIH-1 transfected: sc-159159 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kato, H., et al. 2006. Induction of human endometrial cancer cell senescence through modulation of HIF-1α activity by EGLN1. Int. J. Cancer 118: 1144-1153.
2. Schodel, J., et al. 2010. Factor inhibiting HIF limits the expression of hypoxia-inducible genes in podocytes and distal tubular cells. Kidney Int. 78: 857-867.
3. Olaru, A.V., et al. 2011. Dynamic changes in the expression of MicroRNA-31 during inflammatory bowel disease-associated neoplastic transformation. Inflamm. Bowel Dis. 17: 221-231.
4. Weir, L., et al. 2011. Hypoxia-mediated control of HIF/ARNT machinery in epidermal keratinocytes. Biochim. Biophys. Acta 1813: 60-72.
5. Kuzmanov, A., et al. 2012. Overexpression of factor inhibiting HIF-1 enhances vessel maturation and tumor growth via platelet-derived growth factor-C. Int. J. Cancer 131: E603-E613.