

FIH-1 (A-5): sc-271780



The Power to Question

BACKGROUND

Factor inhibiting HIF-1 (FIH-1) exists as a homodimer and binds to HIF-1 α . 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-1 α . This hydroxylation event blocks the association of HIF-1 α with coactivators. FIH-1 also binds to von Hippel-Lindau (VHL) tumor suppressor protein, which represses transcriptional activity of HIF-1 α . 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 (A-5) is a mouse monoclonal antibody raised against amino acids 15-243 mapping within an internal region of FIH-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FIH-1 (A-5) is available conjugated to agarose (sc-271780 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271780 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271780 PE), fluorescein (sc-271780 FITC), Alexa Fluor[®] 488 (sc-271780 AF488), Alexa Fluor[®] 546 (sc-271780 AF546), Alexa Fluor[®] 594 (sc-271780 AF594) or Alexa Fluor[®] 647 (sc-271780 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271780 AF680) or Alexa Fluor[®] 790 (sc-271780 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

FIH-1 (A-5) is recommended for detection of FIH-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

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.

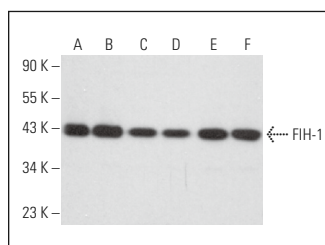
Molecular Weight of FIH-1: 40 kDa.

Positive Controls: A-673 cell lysate: sc-2414, Caki-1 cell lysate: sc-2224 or A-10 cell lysate: sc-3806.

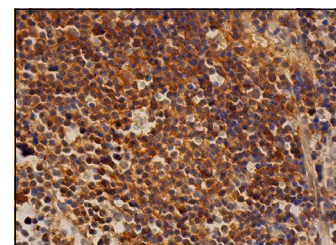
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



FIH-1 (A-5): sc-271780. Western blot analysis of FIH-1 expression in A-673 (A), Caki-1 (B), WEHI-231 (C), C2C12 (D), L6 (E) and A-10 (F) whole cell lysates.



FIH-1 (A-5): sc-271780. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and nuclear staining of cells in germinal and non-germinal centers.

SELECT PRODUCT CITATIONS

- Peng, H., et al. 2012. microRNA-31/factor-inhibiting hypoxia-inducible factor 1 nexus regulates keratinocyte differentiation. *Proc. Natl. Acad. Sci. USA* 109: 14030-14034.
- Peng, H., et al. 2014. FIH-1 disrupts an LRRK1/EGFR complex to positively regulate keratinocyte migration. *Am. J. Pathol.* 184: 3262-3271.
- Zhang, H., et al. 2015. MicroRNA-455 regulates brown adipogenesis via a novel HIF1an-AMPK-PGC1 α signaling network. *EMBO Rep.* 16: 1378-1393.
- Kang, J., et al. 2018. FIH permits NAA10 to catalyze the oxygen-dependent lysyl-acetylation of HIF-1 α . *Redox Biol.* 19: 364-374.
- Kim, I., et al. 2018. A novel HIF1AN substrate KANK3 plays a tumor-suppressive role in hepatocellular carcinoma. *Cell Biol. Int.* 42: 303-312.
- Bargiela, D., et al. 2022. Vitamin B6 metabolism determines T cell anti-tumor responses. *Front. Immunol.* 13: 837669.

STORAGE

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

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