FIH-1 monoclonal antibody

Catalog: MB67227 Host: Mouse Reactivity: Human

BackGround:

FIH (Factor inhibiting HIF-1, HIF asparagine hydroxylase) is a dioxygen-dependent asparaginyl hydroxylase that modifies target protein function by hydroxylating target protein asparagine residues. Hypoxia-inducible factor (HIF), a transcriptional activator involved in control of cell cycle in response to hypoxic conditions, is an important target for FIH regulation. FIH functions as an oxygen sensor that regulates HIF function by hydroxylating at Asn803 in the carboxy-terminal transactivation domain (CAD) of HIF. During normoxia, FIH uses cellular oxygen to hydroxylate HIF-1 and prevent interaction of HIF-1 with transcriptional coactivators, including the CBP/p300-interacting transactivator. Under hypoxic conditions, FIH remains inactive and does not inhibit HIF, allowing the activator to regulate transcription of genes in response to low oxygen conditions. FIH activity is regulated in through interaction with proteins, including Siah-1, which targets FIH for proteasomal degradation. The Cut-like homeodomain protein CDP can bind the FIH promoter region to regulate FIH expression at the transcriptional level. Phosphorylation of HIF at Thr796 also can prevent FIH hydroxylation on Asn803. Potential FIH substrates also include proteins with ankyrin repeat domains, such as Iκ-B, Notch, and ASB4.

Product:

Mouse IgG1 kappa. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 42 kDa

Swiss-Prot:

Q9NWT6

Purification&Purity:

This antibody is purified through a protein G column.

Applications:

WB (1/1000 - 1/2000), IF/ICC (1/10 - 1/50)

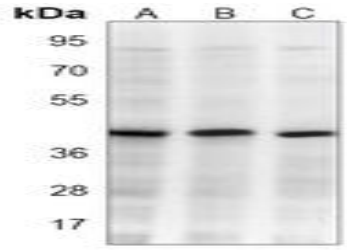
Storage&Stability:

Store at 4℃ short term. Aliquot and store at -20℃ long term. Avoid freeze-thaw cycles.

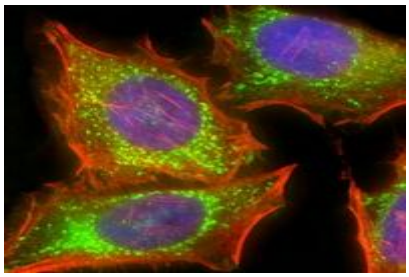
Specificity:

Recognizes endogenous levels of FIH-1 protein.

DATA:



Western blot analysis of FIH-1 expression in 293 (A), Jurkat (B), ZR751 (C) whole cell lysates.



Immunofluorescent analysis of FIH-1 staining in Hela cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 ℃ in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF555 was used to stain the cytoplasm (red). DAPI was used to stain the cell nuclei (blue).

Note:

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

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