

#4426 Store at -20°C

FIH (D19B3) Rabbit mAb



100 µl
 (10 western blots)

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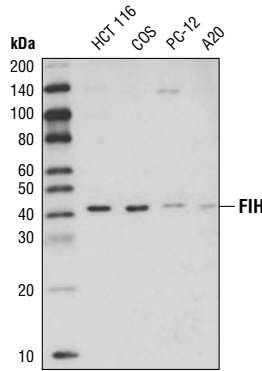
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, R, Mk	42 kDa	Rabbit IgG**

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 (1-3). 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 (4,5). 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 (4-6). FIH activity is regulated through interaction with proteins, including Siah-1, which targets FIH for proteasomal degradation (7). The Cut-like homeodomain protein CDP can bind the FIH promoter region to regulate FIH expression at the transcriptional level (8). Phosphorylation of HIF at Thr796 also can prevent FIH hydroxylation on Asn803 (9). Potential FIH substrates also include proteins with ankyrin repeat domains, such as Iκ-B, Notch, and ASB4 (10-12).

Specificity/Sensitivity: FIH (D19B3) Rabbit mAb detects endogenous levels of total FIH protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Tyr35 of human FIH protein.



Western blot analysis of extracts from various cell types using FIH (D19B3) Rabbit mAb.

Entrez-Gene ID #55662
Swiss-Prot Acc. #Q9NWT6

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols, please see the web page for this product at www.cellsignal.com

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) Koivunen, P. et al. (2004) *J Biol Chem* 279, 9899-904.
- (2) Linke, S. et al. (2004) *J Biol Chem* 279, 14391-7.
- (3) Lisy, K. and Peet, D.J. (2008) *Cell Death Differ* 15, 642-9.
- (4) Mahon, P.C. et al. (2001) *Genes Dev* 15, 2675-86.
- (5) Lando, D. et al. (2002) *Genes Dev* 16, 1466-71.
- (6) Lando, D. et al. (2002) *Science* 295, 858-61.
- (7) Fukuba, H. et al. (2007) *Biochem Biophys Res Commun* 353, 324-9.
- (8) Li, J. et al. (2007) *Mol Cell Biol* 27, 7345-53.
- (9) Lancaster, D.E. et al. (2004) *Biochem J* 383, 429-37.
- (10) Ferguson, J.E. et al. (2007) *Mol Cell Biol* 27, 6407-19.
- (11) Cockman, M.E. et al. (2006) *Proc Natl Acad Sci USA* 103, 14767-72.
- (12) Cockman, M.E. et al. (2009) *Mol Cell Proteomics* 8, 535-46.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.