

FBH1 Rabbit pAb

Catalog # AP98626

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8NEZ0
Other Accession	Q8NEZ0
Reactivity	Rat
Predicted	Human, Mouse, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	117686
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human FBXO18
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the helicase family. UvrD subfamily. Contains 1 F-box domain.
SUBUNIT	Part of a SCF E3 ubiquitin ligase complex consisting of SKP1, CUL1, RBX1 and FBXO18. Interacts with SKP1.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	FBXO18 belongs to the F-box protein family, whose members share the F-box, an approximately 40 amino acid motif. It has both DNA-dependent ATPase and DNA unwinding activities. FBXO18 is a 1,043 amino acid protein encoded by the human gene FBXO18. FBXO18 belongs to the helicase family (UvrD subfamily) and contains one F-box domain. This nuclear protein is a DNA-dependent ATPase that unwinds double-stranded DNA in a 3' to 5' direction. FBXO18 also recognizes and binds to a variety of phosphorylated proteins and promotes their ubiquitination and degradation. It also interacts with Skp1 in the SCF E3 ubiquitin ligase complex consisting of Skp1, CUL-1, Rbx1 and FBXO18.

Additional Information

Gene ID	84893
Other Names	FBH1_HUMAN; FBH1; hFBH1; DNA 3'-5' helicase 1; F-box only protein 18; 5.6.2.4; FBX18; FBXO18; F-box DNA helicase 1; F-box protein, helicase, 18
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	FBH1 (HGNC:13620)
Synonyms	FBX18, FBXO18
Function	3'-5' DNA helicase and substrate-recognition component of the SCF(FBH1) E3 ubiquitin ligase complex that plays a key role in response to stalled/damaged replication forks (PubMed:11956208, PubMed:23393192). Involved in genome maintenance by acting as an anti- recombinogenic helicase and preventing extensive strand exchange during homologous recombination: promotes RAD51 filament dissolution from stalled forks, thereby inhibiting homologous recombination and preventing excessive recombination (PubMed:17724085, PubMed:19736316). Also promotes cell death and DNA double-strand breakage in response to replication stress: together with MUS81, promotes the endonucleolytic DNA cleavage following prolonged replication stress via its helicase activity, possibly to eliminate cells with excessive replication stress (PubMed:23319600, PubMed:23361013). Plays a major role in remodeling of stalled DNA forks by catalyzing fork regression, in which the fork reverses and the two nascent DNA strands anneal (PubMed:25772361). In addition to the helicase activity, also acts as the substrate- recognition component of the SCF(FBH1) E3 ubiquitin ligase complex, a complex that mediates ubiquitination of RAD51, leading to regulate RAD51 subcellular location (PubMed:25585578).
Cellular Location	Nucleus. Chromosome Note=Accumulates at sites of DNA damage or replication stress (PubMed:19736316, PubMed:23677613). PCNA is required for localization to DNA damage sites (PubMed:23677613). Localizes to the nucleoplasm in absence of DNA damage (PubMed:23677613).

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