10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

FBXL5 Rabbit pAb

Catalog # AP100003

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9UKA1
Other Accession	Q9UKA1
Reactivity	Rat, Human, Mouse
Predicted	Pig, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	78555
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human FBXL5
Epitope Specificity	31-130/691
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 F-box domain. Contains 7 LRR (leucine-rich) repeats.
SUBUNIT	Part of a SCF (SKP1-cullin-F-box) protein ligase complex. Interacts with ACO1/IRP1, IREB2/IRP2; the interaction depends on the 4Fe-4S cluster. Interacts with DCTN1/p150-glued.
Post-translational modifications	Ubiquitinated upon iron and oxygen depletion, leading to its degradation by the proteasome. Ubiquitination is regulated by the hemerythrin-like region that acts as an oxygen and iron sensor.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Component of some SCF (SKP1-cullin-F-box) protein ligase complex that plays a central role in iron homeostasis by promoting the ubiquitination and subsequent degradation of IREB2/IRP2. Upon high iron and oxygen level, it specifically recognizes and binds IREB2/IRP2, promoting its ubiquitination and degradation by the proteasome. Promotes ubiquitination and subsequent degradation of DCTN1/p150-glued.

Additional Information

Gene ID	26234
Other Names	FBL4; FBL5; FLR1; Fir4; FBXL5_HUMAN; FBXL5; F-box and leucine-rich repeat protein 5; F-box protein FBL4/FBL5; p45SKP2-like protein; FBXL5_MOUSE; F-box and leucine rich repeat protein 5; CC2D2A antisense RNA 1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:50-100,IF=1:50-200,Flow-Cyt=1ug/Test
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	FBXL5
Synonyms	FBL4, FBL5, FLR1
Function	Component of some SCF (SKP1-cullin-F-box) protein ligase complex that plays a central role in iron homeostasis by promoting the ubiquitination and subsequent degradation of IREB2/IRP2 (PubMed:19762596, PubMed:19762597). The C-terminal domain of FBXL5 contains a redox-sensitive [2Fe-2S] cluster that, upon oxidation, promotes binding to IRP2 to effect its oxygen-dependent degradation (PubMed:32126207). Under iron deficiency conditions, the N-terminal hemerythrin-like (Hr) region, which contains a diiron metal center, cannot bind iron and undergoes conformational changes that destabilize the FBXL5 protein and cause its ubiquitination and degradation (PubMed:19762596, PubMed:19762597). When intracellular iron levels start rising, the Hr region is stabilized (PubMed:19762596, PubMed:19762597). Additional increases in iron levels facilitate the assembly and incorporation of a redox active [2Fe-2S] cluster in the C- terminal domain (PubMed:32126207). Only when oxygen level is high enough to maintain the cluster in its oxidized state can FBXL5 recruit IRP2 as a substrate for polyubiquitination and degradation (PubMed:32126207). Promotes ubiquitination and subsequent degradation of the dynactin complex component DCTN1 (PubMed:17532294). Within the nucleus, promotes the ubiquitination of SNAI1; preventing its interaction with DNA and promoting its degradation (PubMed:24157836). Negatively regulates DNA damage response by mediating the ubiquitin- proteasome degradation of the DNA repair protein NABP2 (PubMed:25249620).
Cellular Location	Cytoplasm, perinuclear region. Nucleus

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.