

FBXL5 / FBL5 Antibody (aa510-691)
Rabbit Polyclonal Antibody
Catalog # ALS16064**Specification**

FBXL5 / FBL5 Antibody (aa510-691) - Product Information

Application	WB, IHC
Primary Accession	O9UKA1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	79kDa KDa

FBXL5 / FBL5 Antibody (aa510-691) - Additional Information**Gene ID** 26234**Other Names**

F-box/LRR-repeat protein 5, F-box and leucine-rich repeat protein 5, F-box protein FBL4/FBL5, p45SKP2-like protein, FBXL5, FBL4, FBL5, FLR1

Target/Specificity

Human FBXL5.

Reconstitution & Storage

Store at -20°C for up to one year.

Precautions

FBXL5 / FBL5 Antibody (aa510-691) is for research use only and not for use in diagnostic or therapeutic procedures.

FBXL5 / FBL5 Antibody (aa510-691) - 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:32126207).

[19762596](http://www.uniprot.org/citations/19762596), PubMed: [19762597](http://www.uniprot.org/citations/19762597)). When intracellular iron levels start rising, the Hr region is stabilized (PubMed: [19762596](http://www.uniprot.org/citations/19762596), PubMed: [19762597](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/32126207)). Promotes ubiquitination and subsequent degradation of the dynactin complex component DCTN1 (PubMed: [17532294](http://www.uniprot.org/citations/17532294)). Within the nucleus, promotes the ubiquitination of SNAI1; preventing its interaction with DNA and promoting its degradation (PubMed: [24157836](http://www.uniprot.org/citations/24157836)). Negatively regulates DNA damage response by mediating the ubiquitin- proteasome degradation of the DNA repair protein NABP2 (PubMed: [25249620](http://www.uniprot.org/citations/25249620)).

Cellular Location

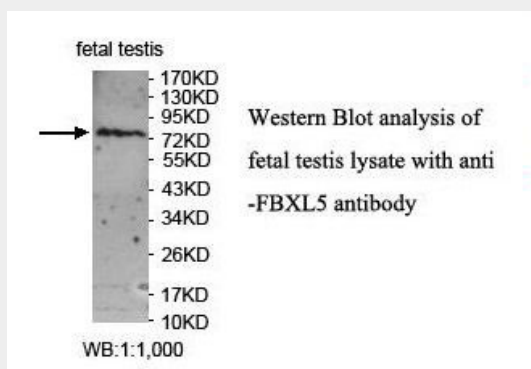
Cytoplasm, perinuclear region. Nucleus

FBXL5 / FBL5 Antibody (aa510-691) - Protocols

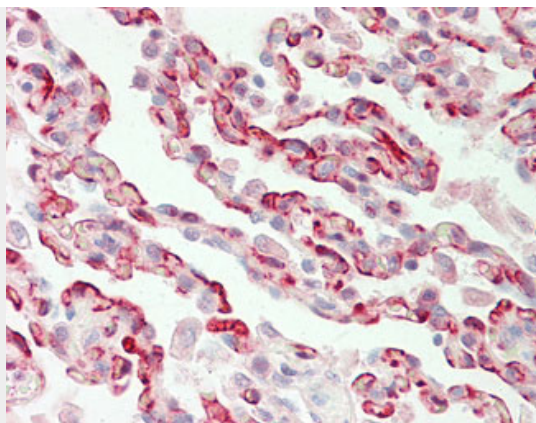
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

FBXL5 / FBL5 Antibody (aa510-691) - Images



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Anti-FBXL5 / FBL5 antibody IHC staining of human lung.

FBXL5 / FBL5 Antibody (aa510-691) - Background

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.

FBXL5 / FBL5 Antibody (aa510-691) - References

- Winston J.T.,et al.Curr. Biol. 9:1180-1182(1999).
Ilyin G.P.,et al.Genomics 67:40-47(2000).
Shimbara N.,et al.Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).