

FBXL5 Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP9409a**Specification**

FBXL5 Antibody (N-term) Blocking peptide - Product InformationPrimary Accession [Q9UKA1](#)**FBXL5 Antibody (N-term) Blocking peptide - 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

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

FBXL5 Antibody (N-term) Blocking peptide - 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](http://www.uniprot.org/citations/19762596), PubMed: [19762597](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](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). 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 SNAIL; 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

FBXL5 Antibody (N-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

FBXL5 Antibody (N-term) Blocking peptide - Images

FBXL5 Antibody (N-term) Blocking peptide - References

Salahudeen, A.A., et al. Science 326(5953):722-726(2009)Vashisht, A.A., et al. Science 326(5953):718-721(2009)Zhang, N., et al. Biochem. Biophys. Res. Commun. 359(1):34-39(2007)Ilyin, G.P., et al. Genomics 67(1):40-47(2000)Winston, J.T., et al. Curr. Biol. 9(20):1180-1182(1999)Cenciarelli, C., et al. Curr. Biol. 9(20):1177-1179(1999)