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FBXO7 Rabbit pAb

Catalog # AP98625

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q9Y3I1
Other Accession	Q9Y3I1
Predicted	Rat, Human, Mouse, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58503
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human FBXO7
Epitope Specificity	251-350/522
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.
SUBUNIT	Part of the SCF (SKP1-CUL1-F-box) E3 ubiquitin-protein ligase complex SCF(FBXO7) formed of CUL1, SKP1, RBX1 and FBXO7. Interacts via its C-terminal proline-rich region with DLGAP5. Interacts with BIRC2. Interacts with CDK6 and promotes its interaction with D-type cyclin.
DISEASE	Defects in FBXO7 are the cause of Parkinson disease type 15 (PARK15) [MIM:260300]; also known as parkinsonian-pyramidal syndrome. A neurodegenerative disorder characterized by parkinsonian and pyramidal signs. Clinical manifestations include tremor, bradykinesia, rigidity, postural instability, spasticity, mainly in the lower limbs, and hyperreflexia.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	FBXO7, also known as FBX, FBX7 or PKPS, is a 522 amino acid protein that contains one F-box domain and functions as a component of the SCF complex. Defects in the gene encoding FBXO7 are associated with parkinsonian-pyramidal syndrome (PKPS), a hypokinetic rigid disorder that exhibits Parkinsonian and pyramidal-associated symptoms.The FBXO7 gene encodes a member of the F-box protein family which is characterized by an approximately 40 amino acid motif, the F-box. F-box proteins constitute one of the four subunits of the ubiquitin protein ligase complex called SCFs (SKP1-cullin-F-box), which function in phosphorylation-dependent ubiquitination. The F-box proteins are divided into 3 classes: Fbws containing WD-40 domains, Fbls containing leucine-rich repeats, and Fbxs containing either different protein-protein interaction modules or no recognizable motifs. The protein encoded by this gene belongs to the Fbxs class and it may play a role in regulation of hematopoiesis. Alternatively spliced transcript variants of this gene have been identified with the full-length natures of only some variants being determined.

Additional Information

Gene ID	25793
Other Names	FBX; FBX07; FBX7; PARK15; PKPS; FBX7_HUMAN; FBXO7; F-box protein 7; F-box only protein 7
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
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	FBXO7
Synonyms	FBX7
Function	Substrate recognition component of a SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complex which mediates the ubiquitination and subsequent proteasomal degradation of target proteins and plays a role in several biological processes such as cell cycle, cell proliferation, or maintenance of chromosome stability (PubMed:15145941, PubMed:34791250). Recognizes and ubiquitinates BIRC2 and the cell cycle regulator DLGAP5 (PubMed:15145941, PubMed:16510124, PubMed:22212761). Plays a role downstream of PINK1 in the clearance of damaged mitochondria via selective autophagy (mitophagy) by targeting PRKN to dysfunctional depolarized mitochondria. Promotes MFN1 ubiquitination. Mediates the ubiquitination and proteasomal degradation of UXT isoform 2, thereby impairing the NF-kappa-B signaling pathway (PubMed:33010352). Inhibits NF-kappa-B pathway also by promoting the ubiquitination of TRAF2 (PubMed:22212761). Affects the assembly state and activity of the proteasome in the cells including neurons by ubiquitinating the proteasomal subunit PSMA2 via 'Lys-63'-linked polyubiquitin chains (By similarity). Promotes 'Lys-48'-linked polyubiquitination SIRT7, leading to the hydrogen peroxide-induced cell death (PubMed:36646384).
Cellular Location	Cytoplasm. Nucleus Mitochondrion. Cytoplasm, cytosol. Note=Predominantly cytoplasmic (PubMed:16096642). A minor proportion is detected in the nucleus (PubMed:16096642). Relocates from the cytosol to depolarized mitochondria (PubMed:23933751).

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