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FBXW7 Blocking Peptide (N-term)

Synthetic peptide

Catalog # BP21277a

Specification

FBXW7 Blocking Peptide (N-term) - Product Information

Primary Accession Q969H0

FBXW7 Blocking Peptide (N-term) - Additional Information

Gene ID 55294

Other Names
F-box/WD repeat-containing protein 7, Archipelago homolog, hAgo, F-box and WD-40 domain-containing protein 7, F-box protein FBX30, SEL-10, hCdc4, FBXW7 (HGNC:16712)

Target/Specificity
The synthetic peptide sequence is selected from aa 177-188 of HUMAN FBXW7 (HGNC:16712)

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.

FBXW7 Blocking Peptide (N-term) - Protein Information

Name FBXW7 (HGNC:16712)

FBXW7 Blocking Peptide (N-term) - Background

Substrate recognition component of an SCF (SKP1-CUL1-F- box protein) E3 ubiquitin-protein ligase complex which mediates the ubiquitination and subsequent proteasomal degradation of target proteins. Recognizes and binds phosphorylated sites/phosphodegrons within target proteins and thereafter bring them to the SCF complex for ubiquitination. Identified substrates include cyclin-E, MYC, NOTCH1 released notch intracellular domain (NICD), and probably PSEN1.

FBXW7 Blocking Peptide (N-term) - References

Winston J.T.,et al.Curr. Biol. 9:1180-1182(1999).
Moberg K.H.,et al.Nature 413:311-316(2001).
Strohmaier H.,et al.Nature 413:316-322(2001).
Li J.,et al.J. Neurochem. 82:1540-1548(2002).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).

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. Recognizes and binds phosphorylated sites/phosphodegrons within target proteins and thereafter bring them to the SCF complex for ubiquitination (PubMed:22748924, PubMed:17434132, PubMed:26976582, PubMed:28727686). Identified substrates include cyclin-E (CCNE1 or CCNE2), DISC1, JUN, MYC, NOTCH1 released notch intracellular domain (NICD), NOTCH2, MCL1, and probably PSEN1 (PubMed:11565034, PubMed:12354302, PubMed:11585921, PubMed:15103331, PubMed:14739463, PubMed:17558397, PubMed:17873522, PubMed:22608923, PubMed:22748924, PubMed:29149593, PubMed:<a href="http://www.uniprot.org/citations/25775507"

target="_blank">25775507, PubMed:28007894, PubMed:26976582, PubMed:28727686). Acts as a negative regulator of JNK signaling by binding to phosphorylated JUN and promoting its ubiquitination and subsequent degradation (PubMed:14739463). SCF(FBXW7) complex mediates the ubiquitination and subsequent degradation of NFE2L1 (By similarity). Involved in bone homeostasis and negative regulation of osteoclast differentiation (PubMed:29149593). Regulates the amplitude of the cyclic expression of hepatic core clock genes and genes involved in lipid and glucose metabolism via ubiquitination and proteasomal degradation of their transcriptional repressor NR1D1; CDK1-dependent phosphorylation of NR1D1 is necessary for SCF(FBXW7)-mediated ubiquitination (PubMed:27238018).

Cellular Location
[Isoform 1]: Nucleus, nucleoplasm [Isoform 3]: Nucleus, nucleolus

Tissue Location
Isoform 1 is widely expressed. Isoform 3 is expressed in brain.

FBXW7 Blocking Peptide (N-term) - Protocols

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

- Blocking Peptides