

BRTC1/2 Blocking Peptide (N-term)
Synthetic peptide
Catalog # BP20478a**Specification**

BRTC1/2 Blocking Peptide (N-term) - Product Information

Primary Accession [O9Y297](#)
Other Accession [Q3ULA2](#)

BRTC1/2 Blocking Peptide (N-term) - Additional Information

Gene ID 8945

Other Names

F-box/WD repeat-containing protein 1A, E3RSIkappaB, Epididymis tissue protein Li 2a, F-box and WD repeats protein beta-TrCP, plkappaBalpha-E3 receptor subunit, BTRC, BTRCP, FBW1A, FBXW1A

Target/Specificity

The synthetic peptide sequence is selected from aa 142-156 of Human BTRC

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.

BRTC1/2 Blocking Peptide (N-term) - Protein Information

Name BTRC

Synonyms BTRCP, FBW1A, FBXW1A

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 (PubMed:10066435, PubMed:10497169, PubMed:9990852, PubMed:10644755, PubMed:10835356, PubMed:11238952, PubMed:11359933, PubMed:11158290, PubMed:<a href="http://www.uniprot.org/citations/11994270"

target="_blank">11994270, PubMed:12791267, PubMed:12902344, PubMed:14603323, PubMed:14681206, PubMed:14988407, PubMed:15448698, PubMed:15917222, PubMed:16371461, PubMed:25503564, PubMed:25704143, PubMed:9859996, PubMed:22017875, PubMed:22017876, PubMed:22017877, PubMed:22087322, PubMed:36608670). Recognizes and binds to phosphorylated target proteins (PubMed:10066435, PubMed:10497169, PubMed:9990852, PubMed:10644755, PubMed:10835356, PubMed:11238952, PubMed:11359933, PubMed:11158290, PubMed:11994270, PubMed:12791267, PubMed:12902344, PubMed:14603323, PubMed:14681206, PubMed:14988407, PubMed:15448698, PubMed:15917222, PubMed:16371461, PubMed:25503564, PubMed:25704143, PubMed:9859996, PubMed:22017875, PubMed:22017876, PubMed:22017877, PubMed:22087322, PubMed:36608670). SCF(BTRC) mediates the ubiquitination of CTNNB1 and participates in Wnt signaling (PubMed:12077367, PubMed:12820959). SCF(BTRC) mediates the ubiquitination of phosphorylated NFKB1, ATF4, CDC25A, DLG1, FBXO5, PER1, SMAD3, SMAD4, SNAI1 and probably NFKB2 (PubMed:10835356, PubMed:11238952, PubMed:14681206, PubMed:14603323). SCF(BTRC) mediates the ubiquitination of NFKBIA, NFKBIB and NFKBIE; the degradation frees the associated NFKB1 to translocate into the nucleus and to activate transcription (PubMed:9859996, PubMed:10066435, PubMed:10497169, PubMed:10644755).

Ubiquitination of NFKBIA occurs at 'Lys-21' and 'Lys- 22' (PubMed:10066435). The SCF(FBXW11) complex also regulates NF-kappa- B by mediating ubiquitination of phosphorylated NFKB1: specifically ubiquitinates the p105 form of NFKB1, leading to its degradation (PubMed:10835356, PubMed:11158290, PubMed:14673179). SCF(BTRC) mediates the ubiquitination of CEP68; this is required for centriole separation during mitosis (PubMed:25704143, PubMed:25503564). SCF(BTRC) mediates the ubiquitination and subsequent degradation of nuclear NFE2L1 (By similarity). Has an essential role in the control of the clock- dependent transcription via degradation of phosphorylated PER1 and PER2 (PubMed:15917222). May be involved in ubiquitination and subsequent proteasomal degradation through a DBB1-CUL4 E3 ubiquitin-protein ligase. Required for activation of NFKB-mediated transcription by IL1B, MAP3K14, MAP3K1, IKKB and TNF. Required for proteolytic processing of GLI3 (PubMed:16371461). Mediates ubiquitination of REST, thereby leading to its proteasomal degradation (PubMed:21258371, PubMed:18354482). SCF(BTRC) mediates the ubiquitination and subsequent proteasomal degradation of KLF4; thereby negatively regulating cell pluripotency maintenance and embryogenesis (By similarity). SCF(BTRC) acts as a regulator of mTORC1 signaling pathway by catalyzing ubiquitination and subsequent proteasomal degradation of phosphorylated DEPTOR, TFE3 and MITF (PubMed:22017875, PubMed:22017876, PubMed:22017877, PubMed:33110214, PubMed:36608670).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q3ULA2}. Nucleus {ECO:0000250|UniProtKB:Q3ULA2}

Tissue Location

Expressed in epididymis (at protein level).

BRTC1/2 Blocking Peptide (N-term) - Protocols

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

- [Blocking Peptides](#)

BRTC1/2 Blocking Peptide (N-term) - Images

BRTC1/2 Blocking Peptide (N-term) - Background

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 to phosphorylated target proteins. SCF(BTRC) mediates the ubiquitination of CTNNB1 and participates in Wnt signaling. SCF(BTRC) mediates the ubiquitination of NFKBIA, NFKBIB and NFKBIE; the degradation frees the associated NFKB1 to translocate into the nucleus and to activate transcription. Ubiquitination of NFKBIA occurs at 'Lys-21' and 'Lys-22'. SCF(BTRC) mediates the ubiquitination of phosphorylated NFKB1/nuclear factor NF-kappa-B p105 subunit, ATF4, SMAD3, SMAD4, CDC25A, DLG1, FBXO5 and probably NFKB2. SCF(BTRC) mediates the ubiquitination of phosphorylated SNAI1. May be involved in ubiquitination and subsequent

proteasomal degradation through a DBB1-CUL4 E3 ubiquitin-protein ligase. Required for activation of NFkB-mediated transcription by IL1B, MAP3K14, MAP3K1, IKBKB and TNF. Required for proteolytic processing of GLI3.

BRTC1/2 Blocking Peptide (N-term) - References

Busino L., et al. Nature 426:87-91(2003).
Wan M., et al. J. Biol. Chem. 279:14484-14487(2004).
Zhou B.P., et al. Nat. Cell Biol. 6:931-940(2004).
Yaron A., et al. Nature 396:590-594(1998).
Margottin F., et al. Mol. Cell 1:565-574(1998).