

**Ubiquilin 4 Blocking Peptide (N-term)**

Synthetic peptide

Catalog # BP20424a

**Specification**

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**Ubiquilin 4 Blocking Peptide (N-term) - Product Information**

Primary Accession

[Q9NRR5](#)**Ubiquilin 4 Blocking Peptide (N-term) - Additional Information**

Gene ID 56893

**Other Names**

Ubiquilin-4, Ataxin-1 interacting ubiquitin-like protein, A1Up, Ataxin-1 ubiquitin-like-interacting protein A1U, Connexin43-interacting protein of 75 kDa, CIP75, UBQLN4, C1orf6, CIP75, UBIN

**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.

**Ubiquilin 4 Blocking Peptide (N-term) - Protein Information****Name** UBQLN4 {ECO:0000303|PubMed:27113755, ECO:0000312|HGNC:HGNC:1237}**Function**

Regulator of protein degradation that mediates the proteasomal targeting of misfolded, mislocalized or accumulated proteins (PubMed:<a href="http://www.uniprot.org/citations/15280365" target="\_blank">15280365</a>, PubMed:<a href="http://www.uniprot.org/citations/27113755" target="\_blank">27113755</a>, PubMed:<a href="http://www.uniprot.org/citations/29666234" target="\_blank">29666234</a>, PubMed:<a href="http://www.uniprot.org/citations/30612738" target="\_blank">30612738</a>). Acts by binding polyubiquitin chains of target proteins via its UBA domain and by interacting with subunits of the proteasome via its ubiquitin-like domain (PubMed:<a href="http://www.uniprot.org/citations/15280365" target="\_blank">15280365</a>, PubMed:<a href="http://www.uniprot.org/citations/27113755" target="\_blank">27113755</a>, PubMed:<a href="http://www.uniprot.org/citations/30612738" target="\_blank">30612738</a>). Key regulator of DNA repair that represses homologous recombination repair: in response to DNA damage, recruited to sites of DNA damage following phosphorylation by ATM and acts by binding and removing ubiquitinated MRE11 from damaged chromatin, leading to MRE11 degradation by the proteasome (PubMed:<a href="http://www.uniprot.org/citations/30612738" target="\_blank">30612738</a>). MRE11 degradation prevents homologous recombination repair, redirecting double-strand break repair toward non-homologous end joining (NHEJ) (PubMed:<a

[30612738](http://www.uniprot.org/citations/30612738)). Specifically recognizes and binds mislocalized transmembrane-containing proteins and targets them to proteasomal degradation (PubMed: [27113755](http://www.uniprot.org/citations/27113755)). Collaborates with DESI1/POST in the export of ubiquitinated proteins from the nucleus to the cytoplasm (PubMed: [29666234](http://www.uniprot.org/citations/29666234)). Also plays a role in the regulation of the proteasomal degradation of non-ubiquitinated GJA1 (By similarity). Acts as an adapter protein that recruits UBQLN1 to the autophagy machinery (PubMed: [23459205](http://www.uniprot.org/citations/23459205)). Mediates the association of UBQLN1 with autophagosomes and the autophagy-related protein LC3 (MAP1LC3A/B/C) and may assist in the maturation of autophagosomes to autolysosomes by mediating autophagosome-lysosome fusion (PubMed: [23459205](http://www.uniprot.org/citations/23459205)).

#### **Cellular Location**

Nucleus. Cytoplasm. Chromosome Endoplasmic reticulum {ECO:0000250|UniProtKB:Q99NB8}. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:Q99NB8}. Cytoplasmic vesicle, autophagosome. Note=Colocalizes with the proteasome, both in nucleus and cytoplasm (PubMed:15280365). Exported from the nucleus following interaction with DESI1/POST (PubMed:29666234). In response to DNA damage and phosphorylation at Ser-318 by ATM, localizes to the nucleus and is recruited to sites of DNA damage (PubMed:30612738).

#### **Tissue Location**

Highly expressed in pancreas, kidney, skeletal muscle, heart and throughout the brain, and at lower levels in placenta, lung and liver.

#### **Ubiquilin 4 Blocking Peptide (N-term) - Protocols**

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

- [Blocking Peptides](#)

#### **Ubiquilin 4 Blocking Peptide (N-term) - Images**

#### **Ubiquilin 4 Blocking Peptide (N-term) - Background**

Plays a role in the regulation of proteasomal protein degradation. Depending on the case, may promote or inhibit proteasomal protein degradation.