

## Ubiquitin Antibody (C-term) Blocking Peptide

Synthetic peptide  
Catalog # BP1229a

### Specification

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#### Ubiquitin Antibody (C-term) Blocking Peptide - Product Information

Primary Accession [POCG48](#)  
Other Accession [P62988](#)

#### Ubiquitin Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 7316

#### Other Names

Polyubiquitin-C, Ubiquitin, UBC

#### Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP1229a](/product/products/AP1229a) was selected from the C-term region of human Ubiquitin. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

#### 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.

#### Ubiquitin Antibody (C-term) Blocking Peptide - Protein Information

Name UBC

#### Function

[Ubiquitin]: Exists either covalently attached to another protein, or free (unanchored). When covalently bound, it is conjugated to target proteins via an isopeptide bond either as a monomer (monoubiquitin), a polymer linked via different Lys residues of the ubiquitin (polyubiquitin chains) or a linear polymer linked via the initiator Met of the ubiquitin (linear polyubiquitin chains). Polyubiquitin chains, when attached to a target protein, have different functions depending on the Lys residue of the ubiquitin that is linked: Lys-6-linked may be involved in DNA repair; Lys-11-linked is involved in ERAD (endoplasmic reticulum-associated degradation) and in cell-cycle regulation; Lys-29-linked is involved in proteotoxic stress response and cell cycle; Lys-33-linked is involved in kinase modification; Lys-48-linked is involved in protein degradation via the proteasome; Lys-63-linked is involved in endocytosis, DNA-damage responses as well as in signaling processes leading to activation of the transcription factor NF-kappa-B. Linear polymer

chains formed via attachment by the initiator Met lead to cell signaling. Ubiquitin is usually conjugated to Lys residues of target proteins, however, in rare cases, conjugation to Cys or Ser residues has been observed. When polyubiquitin is free (unanchored-polyubiquitin), it also has distinct roles, such as in activation of protein kinases, and in signaling.

#### **Cellular Location**

[Ubiquitin]: Cytoplasm. Nucleus. Mitochondrion outer membrane; Peripheral membrane protein

#### **Ubiquitin Antibody (C-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

#### **Ubiquitin Antibody (C-term) Blocking Peptide - Images**

#### **Ubiquitin Antibody (C-term) Blocking Peptide - Background**

Ubiquitin is a 76 amino acid highly conserved eukaryotic polypeptide that selectively marks cellular proteins for proteolytic degradation by the 26S proteasome. The process of target selection, covalent attachment and shuttle to the 26S proteasome is a vital means of regulating the concentrations of key regulatory proteins in the cell by limiting their lifespans. Polyubiquitination is a common feature of this modification. Serial steps for modification include the activation of ubiquitin, an ATP-dependent formation of a thioester bond between ubiquitin and the enzyme E1, transfer by transacylation of ubiquitin from E1 to the ubiquitin conjugating enzyme E2, and covalent linkage to the target protein directly by E2 or via E3 ligase enzyme. Deubiquitination enzymes also exist to reverse the marking of protein substrates. Posttranslational tagging by Ub is involved in a multitude of cellular processes, including the cell cycle, cell growth and differentiation, embryogenesis, apoptosis, signal transduction, DNA repair, regulation of transcription and DNA replication, transmembrane transport, stress responses, the immune response, and nervous system functions.

#### **Ubiquitin Antibody (C-term) Blocking Peptide - References**

Chan, Y.L., et al., *Biochem. Biophys. Res. Commun.* 215(2):682-690 (1995). Cook, W.J., et al., *J. Mol. Biol.* 236(2):601-609 (1994). Hubbard, M.J., et al., *Biochim. Biophys. Acta* 1200(2):191-196 (1994). Wajih, N., et al., *Protein Seq. Data Anal.* 5(1):31-32 (1992). Cook, W.J., et al., *J. Biol. Chem.* 267(23):16467-16471 (1992).