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UBE3A Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP2154a

Specification

UBE3A Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q05086

UBE3A Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 7337

Other Names
Ubiquitin-protein ligase E3A, 632-, E6AP ubiquitin-protein ligase, Human papillomavirus E6-associated protein, Oncogenic protein-associated protein E6-AP, Renal carcinoma antigen NY-REN-54, UBE3A, E6AP, EPVE6AP, HPVE6A

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2154a was selected from the N-term region of human UBE3A . 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.

UBE3A Antibody (N-term) Blocking Peptide - Protein Information

Name UBE3A (HGNC:12496)

Function
E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and transfers it to its substrates (PubMed:10373495, PubMed:16772533, PubMed:19204938, PubMed:19233847, PubMed:19325566, PubMed:19591933, PubMed:22645313, PubMed:24273172, PubMed:<a

href="http://www.uniprot.org/citations/24728990" target="_blank">24728990, PubMed:30020076). Several substrates have been identified including the BMAL1, ARC, LAMTOR1, RAD23A and RAD23B, MCM7 (which is involved in DNA replication), annexin A1, the PML tumor suppressor, and the cell cycle regulator CDKN1B (PubMed:10373495, PubMed:19204938, PubMed:19325566, PubMed:19591933, PubMed:22645313, PubMed:24728990, PubMed:30020076). Additionally, may function as a cellular quality control ubiquitin ligase by helping the degradation of the cytoplasmic misfolded proteins (PubMed:19233847). Finally, UBE3A also promotes its own degradation in vivo. Plays an important role in the regulation of the circadian clock: involved in the ubiquitination of the core clock component BMAL1, leading to its proteasomal degradation (PubMed:24728990). Acts as transcriptional coactivator of progesterone receptor PGR upon progesterone hormone activation (PubMed:16772533). Acts as a regulator of synaptic development by mediating ubiquitination and degradation of ARC (By similarity). Required for synaptic remodeling in neurons by mediating ubiquitination and degradation of LAMTOR1, thereby limiting mTORC1 signaling and activity-dependent synaptic remodeling (By similarity). Synergizes with WBP2 in enhancing PGR activity (PubMed:16772533).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:O08759}. Nucleus {ECO:0000250|UniProtKB:O08759}

UBE3A Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

UBE3A Antibody (N-term) Blocking Peptide - Images

UBE3A Antibody (N-term) Blocking Peptide - Background

UBE3A interacts with the E6 protein of the cancer-associated human papillomavirus types 16 and 18. The E6/E6-AP complex binds to and targets the p53 tumor-suppressor protein for ubiquitin-mediated proteolysis. It is an E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates. It can target itself for ubiquitination in vitro and efficiently promotes its own degradation in vivo. It appears that only unmodified E6-AP molecules can bind efficiently to p53 in the presence of the HPV E6 oncoprotein. UBE3A binds UBQLN1 and UBQLN2. Defects in UBE3A are a cause of Angelman syndrome (AS) [MIM:105830]; also known as 'happy puppet syndrome'. AS is characterized by features of severe motor and intellectual retardation, microcephaly, ataxia, frequent jerky limb movements and flapping of the arms and hands, hypotonia, hyperactivity, hypopigmentation, seizures, absence of speech, frequent smiling and episodes of paroxysmal laughter, and an unusual facies characterized by macrostomia, a large mandible and open-mouthed expression, a great propensity for protruding the tongue ('tongue thrusting'), and an occipital groove. UBE3A contains 1 HECT-type E3 ubiquitin-protein ligase domain.

UBE3A Antibody (N-term) Blocking Peptide - References

Be, X., et al., Biochemistry 40(5):1293-1299 (2001).Kleijnen, M.F., et al., Mol. Cell 6(2):409-419 (2000).Huang, L., et al., Science 286(5443):1321-1326 (1999).Nuber, U., et al., Eur. J. Biochem. 254(3):643-649 (1998).Malzac, P., et al., Am. J. Hum. Genet. 62(6):1353-1360 (1998).