

Rabbit anti-All Ubiquitin Monoclonal Antibody | anti-UBC antibody

Ubiquitin Antibody, Clone FK2

CATALOG # AAA104166	HOST Rabbit	REACTIVITY All	APPLICATIONS ELISA, Western Blot
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PRODUCT SYNONYMS

Ubiquitin; Monoclonal Antibody; Ubiquitin Antibody; Clone FK2; Rabbit Anti-Human Ubiquitin Recombinant Monoclonal IgG; Polyubiquitin B Antibody; RPS27A Antibody; UBA52 Antibody; UBB Antibody; UBC Antibody; ubiquitin B Antibody; anti-UBC antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	All
Clonality	Monoclonal
Isotype	IgG
Clone Number	FK2
Specificity	Detects ubiquitinated proteins, including poly-ubiquitinated proteins (K29-, K48-, and K63-linked mono- and polyubiquitylated proteins). Does not detect free ubiquitin.
Purity/Purification	Protein A Purified
Form/Format	PBS pH 7.4, 50% glycerol, 0.09% Sodium Azide
Concentration	1 mg/ml (varies by lot)
Sequence Length	229
Applicable Applications for anti-UBC antibody	ELISA, WB (Western Blot)
Target	Ubiquitin
Immunogen	Ubiquitin conjugated lysozyme
Cellular Localization	Cytoplasm; Nucleus
Certificate of Analysis	A 1:1000 dilution of ubiquitin chains (Poly-Ubiquitin: Ub1-Ub7 WT Chains K63-linked, k48-linked) by ECL immunoblot analysis using goat anti-rabbit IgG: HRP as the secondary antibody.
Research Areas	Cell Signaling, Post-translational Modifications, Ubiquitination, Neuroscience, Neurodegeneration, Alzheimer's Disease.
Preparation and Storage	Store at -20°C; 1 year Avoid freeze/thaw cycles.



WB (Western Blot)
Western Blot analysis of Purified poly-ubiquitin chains showing detection of Multiple Ubiquitin protein using Rabbit Anti-Ubiquitin Monoclonal Antibody, Clone FK2. Lane 1: Molecular Weight Ladder (MW). Lane 2: K63 Poly Ubiquitin. Lane 3: K48 Poly Ubiquitin. Load: 2 ug. Block: 5% Skim Milk powder in TBST. Primary Antibody: Rabbit Anti-Ubiquitin Monoclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Goat Anti-Rabbit IgG: HRP at 1:4000 for 1 hour at RT. Color Development: ECL solution for 5 min in RT. Predicted/Observed Size: Multiple.

ADDITIONAL INFORMATION

Related Product Information for anti-UBC antibody	Ubiquitin is a small protein that occurs in all eukaryotic cells. The ubiquitin protein itself consists of 76 amino acids and has a molecular mass of about 8.5kDa. Key features include its C-terminal tail and the 7 Lys residues. It is highly conserved among eukaryotic species: Human and yeast ubiquitin share 96% sequence identity (1). The main function of Ubiquitin is to clear abnormal, foreign and improperly folded proteins by targeting them for degradation by the 26S proteasome (2). Ubiquitination represents an essential cellular process affected by a multi-enzyme cascade involving classes of enzymes known as ubiquitin-activating enzymes (E1s), ubiquitin-conjugating enzymes (E2s or Ubcs) and ubiquitin-protein ligases (E3s). Ubiquitin is activated in a two-step reaction by an E1 ubiquitin-activating enzyme in a process requiring ATP as an energy source. The initial step involves production of an ubiquitin-adenylate intermediate. The second step transfers ubiquitin to the E1 active site cysteine residue, with release of AMP. This step results in a thioester linkage between the C-terminal carboxyl group of ubiquitin and the E1 cysteine sulfhydryl group. The third step is a transfer of ubiquitin from E1 to the active site cysteine of a ubiquitin-conjugating enzyme E2 via a trans(thio)esterification reaction. And the final step of the ubiquitylation cascade creates an isopeptide bond between a lysine of the target protein and the C-terminal glycine of ubiquitin. In general, this step requires the activity of one of the hundreds of E3 ubiquitin-protein ligases (often termed simply ubiquitin ligase). E3 enzymes function as the substrate recognition modules of the system and are capable of interaction with both E2 and substrate(2, 3). Ubiquitination also participates in the internalization and degradation of plasma membrane proteins such as some of the TCR subunits while still ER-membrane associated (4). Ubiquitin also plays a role in regulating signal transduction cascades through the elimination inhibitory proteins, such as IkappaBalpha and p27 (5).
Product Categories/Family for anti-UBC antibody	Antibodies; Recombinant Monoclonal; Cell Signaling; Post-translational Modifications; Ubiquitination; Neuroscience; Neurodegeneration; Alzheimer's Disease
References	1. Wilkinson K.D. (1995) Annu. Rev. Nutr. 15:161-189. 2. Bonifacino J.S., et al. (1998) Annu Rev Cell Dev Biol. 14: 19-57. 3. Boston Biochem: "Ubiquitin Proteasome Pathway Overview" http://www.bostonbiochem.com/upp.php 4. Yang M., et al. (1998) J Exp Med. 187: 1835-1846. 5. Chen Z.J., et al. (1996) Cell 84: 853-862.

NCBI AND UNIPROT INFORMATION

NCBI GI #	528524471
NCBI GeneID	7314
NCBI Accession #	NP_001268645.1
NCBI GenBank Nucleotide #	NM_001281716.1
UniProt Accession #	P0CG47; P02248; P02249; P02250; P62988; Q29120; Q6LBL4; Q6LDU5; Q8WYN8; Q91887; Q91888; Q9BWD6
NCBI Official Full Name	polyubiquitin-B
NCBI Official Synonym Full Names	ubiquitin B
NCBI Official Symbol	UBB
NCBI Official Synonym Symbols	HEL-S-50
NCBI Protein Information	polyubiquitin-B

UniProt Protein Name	Polyubiquitin-B
UniProt Gene Name	UBB

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/ubiquitin-antibody-clone-fk2-western-blot-elisa/104166>