OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA326456

Ubiquitin (UBB) Mouse Monoclonal Antibody [Clone ID: 6C11-B3]

Product data:

Product Type:	Primary Antibodies
Clone Name:	6C11-B3
Applications:	WB
Recommend Dilution:	WB: 1:1000
Reactivity:	Bovine, Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG2a, kappa
Clonality:	Monoclonal
Immunogen:	Native bovine ubiquitin, conjugated to KLH
Formulation:	PBS pH7.4, 50% glycerol, 0.09% sodium azide
Concentration:	1 mg/ml
Purification:	Protein G Purified
Gene Name:	ubiquitin B
Database Link:	NP_061828 Entrez Gene 22187 MouseEntrez Gene 192255 RatEntrez Gene 7314 Human

View online »

Background: 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 . The main function of Ubiquitin is to clear abnormal, foreign and improperly folded proteins by targeting them for degradation by the 26S proteosome . 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. Ubiquitination also participates in the internalization and degradation of plasma membrane proteins such as some of the TCR subunits while still ER-membrane associated . Ubiquitin also plays a role in regulating signal transduction cascades through the elimination inhibitory proteins, such as IB and p27 .

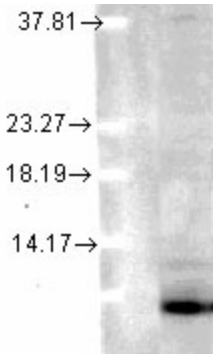
Synonyms: HEL-S-50

Note: This antibody recognizes ~10kDa corresponding to free ubiquitin

Protein Families: Druggable Genome

Protein Pathways: Parkinson's disease

Product images:



Western blot analysis of Ubiquitin in human cell lines using a 1:1000 dilution of the antibody