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Datasheet for 200-301-G62

Ubiquitin Antibody

Overview

Description:	Anti-Ubiquitin (Mouse) Antibody - 200-301-G62
Item No.:	200-301-G62
Size:	200 µg
Applications:	IF, WB
Reactivity:	Human, Mouse, Rat, Bovine
Host Species:	Mouse

Product Details

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 IkBα and p27.
Synonyms:	Polyubiquitin B, RPS27A, UBA52, UBB, UBC, ubiquitin B
Host Species:	Mouse

Clonality:	Monoclonal
Clone ID:	6C11-B3
Format:	IgG2a

Target Details

Gene Name:	UBB
Reactivity:	Human, Mouse, Rat, Bovine
Immunogen Type:	Native Protein
Immunogen:	Ubiquitin Antibody was produced in mice by repeated immunizations raised against native bovine ubiquitin conjugated to KLH.
Purity/Specificity:	Anti-Ubiquitin Antibody was purified by Protein G chromatography. A BLAST analysis was used to suggest cross-reactivity with Ubiquitin from Human, Mouse, Bovine, and Rat based on 100% homology with the immunizing sequence. Cross-reactivity with Ubiquitin from other sources has not been determined. Cell Signaling research.
Relevant Links:	• NCBI - NP_776558.1 • GeneID - 281370 • UniProtKB - P0CG53

Application Details

Tested Applications:	IF, WB
Application Note:	Anti-Ubiquitin Antibody is tested for use in WB and IF. Expect a band approximately ~10kDa corresponding to free ubiquitin. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:200
WB:	1:1000

Formulation

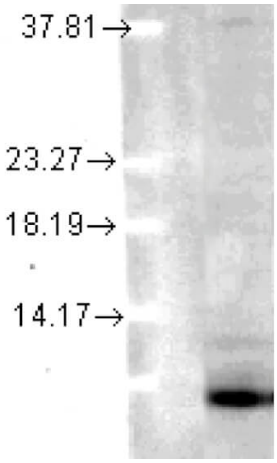
Physical State:	Liquid (sterile filtered)
Concentration:	1mg/mL by UV absorbance at 280 nm

Buffer:	1X PBS, pH 7.4
Preservative:	0.09% (w/v) Sodium Azide
Stabilizer:	50% (v/v) Glycerol

Shipping & Handling

Shipping Condition:	Wet Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot
Western Blot of mouse anti-Ubiquitin antibody. Lane 1: Human cell lines. Primary antibody: Ubiquitin antibody at 1:1000 for overnight at 4°C. Secondary antibody: Goat anti-mouse IgG HRP secondary antibody at 1:10,000 for 45 min at RT. Block: 5% Blotto overnight 4°C. Predicted/Observed size: 25.7 kDa/10kD free ubiquitin. Other band(s): none.

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