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Datasheet for ABIN2481453

anti-Ubiquitin antibody (Alkaline Phosphatase (AP))

5 Images

Overview

Quantity:	200 µL
Target:	Ubiquitin
Reactivity:	Cow
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Ubiquitin antibody is conjugated to Alkaline Phosphatase (AP)
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunocytochemistry (ICC), Immunoprecipitation (IP)

Product Details

Immunogen:	Native bovine Ubiquitin, conjugated to KLH
Specificity:	Detects ~10 kDa. It also recognizes ubiquinated proteins.
Cross-Reactivity:	Chicken, Cow, Dog, Drosophila melanogaster, Fish, Guinea Pig, Hamster, Human, Monkey, Mouse, Pig, Rabbit, Rainbow Trout, Rat, Saccharomyces cerevisiae, Salmon, Sheep, Xenopus laevis
Purification:	Peptide Affinity Purified

Target Details

Target:	Ubiquitin
Alternative Name:	Ubiquitin (Ubiquitin Products)
Background:	Ubiquitin is a small protein that occurs in all eukaryotic cells. The ubiquitin protein itself

Target Details

consists of 76 amino acids and has a molecular mass of about 8.5 kDa. 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 Ubc)s 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(3, 4). Ubiquitination also participates in the internalization and degradation of plasma membrane proteins such as some of the TCR subunits while still ER-membrane associated (5). Ubiquitin also plays a role in regulating signal transduction cascades through the elimination inhibitory proteins, such as I κ B α and p27 (6).

Gene ID: 281370

NCBI Accession: [NP_776558](#)

UniProt: [P0CG53](#)

Pathways: [Mitotic G1-G1/S Phases, Ubiquitin Proteasome Pathway](#)

Application Details

Application Notes:

- WB (1:1000)
- IHC (1:100)
- ICC/IF (1:100)
- optimal dilutions for assays should be determined by the user.

Comment: A 1:1000 dilution of ABIN2481453 was sufficient for detection of free ubiquitin in 15 μ g of HeLa lysate by ECL immunoblot analysis using Donkey anti-rabbit IgG:HRP as the secondary antibody.

Application Details

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 1 mg/mL

Buffer: PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated

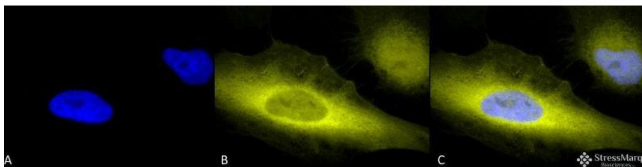
Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: 4 °C

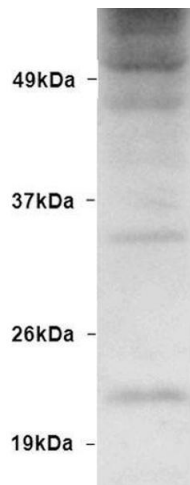
Storage Comment: Conjugated antibodies should be stored at 4°C

Images



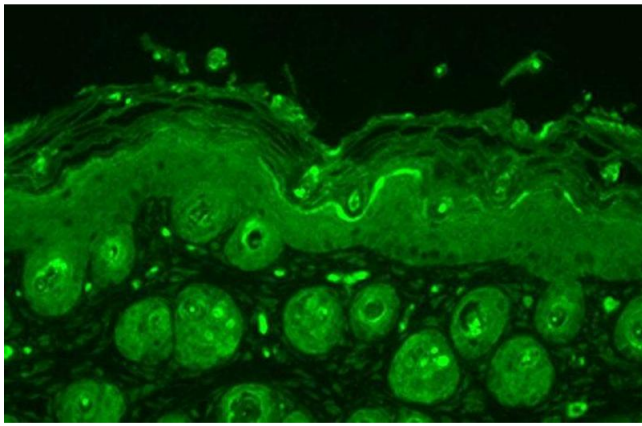
Immunofluorescence (fixed cells)

Image 1. Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Ubiquitin Polyclonal Antibody . Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Ubiquitin Polyclonal Antibody at 1:100 for 12 hours at 4°C. Secondary Antibody: R-PE Goat Anti-Rabbit (yellow) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Cytoplasm. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-Ubiquitin Antibody. (C) Composite. Heat Shocked at 42°C for 1h.



Western Blotting

Image 2. Western blot analysis of Human HEK93 lysates showing detection of Ubiquitin protein using Rabbit Anti-Ubiquitin Polyclonal Antibody . Primary Antibody: Rabbit Anti-Ubiquitin Polyclonal Antibody at 1:1000.



Immunohistochemistry

Image 3. Immunohistochemistry analysis using Rabbit Anti-Ubiquitin Polyclonal Antibody . Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative Solution. Primary Antibody: Rabbit Anti-Ubiquitin Polyclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:50 for 1 hour at RT. Localization: Cytoplasm.

Please check the [product details page](#) for more images. Overall 5 images are available for ABIN2481453.