

#3936 Store at -20C

## Ubiquitin (P4D1) Mouse mAb



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<b>Applications:</b> WB, IHC-P	<b>Reactivity:</b> All	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Mouse IgG1	<b>UniProt ID:</b> #P62987, #P0CG48, #P0CG47, #P62979	<b>Entrez-Gene Id:</b> 7311, 7316, 7314, 6233
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### Product Usage Information

#### Application

Western Blotting  
Immunohistochemistry (Paraffin)

#### Dilution

1:1000  
1:100 - 1:400

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #70990.

### Specificity / Sensitivity

Ubiquitin (P4D1) Mouse mAb detects ubiquitin, polyubiquitin and ubiquitinated proteins. This antibody may cross-react with recombinant NEDD8.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with 1-76 full length bovine ubiquitin.

### Background

Ubiquitin is a conserved polypeptide unit that plays an important role in the ubiquitin-proteasome pathway. Ubiquitin can be covalently linked to many cellular proteins by the ubiquitination process, which targets proteins for degradation by the 26S proteasome. Three components are involved in the target protein-ubiquitin conjugation process. Ubiquitin is first activated by forming a thiolester complex with the activation component E1; the activated ubiquitin is subsequently transferred to the ubiquitin-carrier protein E2, then from E2 to ubiquitin ligase E3 for final delivery to the epsilon-NH<sub>2</sub> of the target protein lysine residue (1-3). The ubiquitin-proteasome pathway has been implicated in a wide range of normal biological processes and in disease-related abnormalities. Several proteins such as IκB, p53, cdc25A, and Bcl-2 have been shown to be targets for the ubiquitin-proteasome process as part of regulation of cell cycle progression, differentiation, cell stress response, and apoptosis (4-7).

### Background References

1. Ciechanover, A. (1998) *EMBO J* 17, 7151-60.
2. Hochstrasser, M. (2000) *Nat Cell Biol* 2, E153-7.
3. Hochstrasser, M. (2000) *Science* 289, 563-4.
4. Bernardi, R. et al. (2000) *Oncogene* 19, 2447-54.
5. Aberle, H. et al. (1997) *EMBO J* 16, 3797-804.
6. Salomoni, P. and Pandolfi, P.P. (2002) *Nat Cell Biol* 4, E152-3.
7. Jesenberger, V. and Jentsch, S. (2002) *Nat Rev Mol Cell Biol* 3, 112-21.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**WB:** Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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