

# Ubiquitin monoclonal antibody (P4D1)

Ubiquitin modification of cellular proteins has been shown to be involved with a wide range of biochemical processes including proteasomal degradation, signal transduction, DNA repair, endocytosis and autophagy.

This antibody is covered by our [Worry-Free Guarantee](#).

Citations: 60

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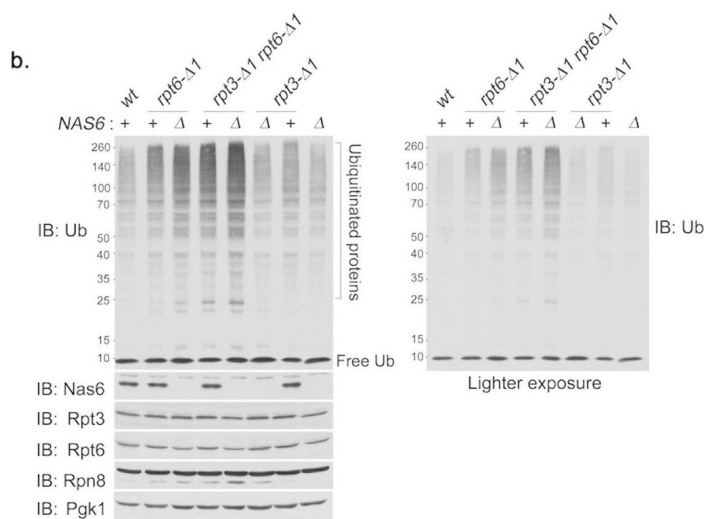
Ordering Information

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BML-PW0930-0100	100µg
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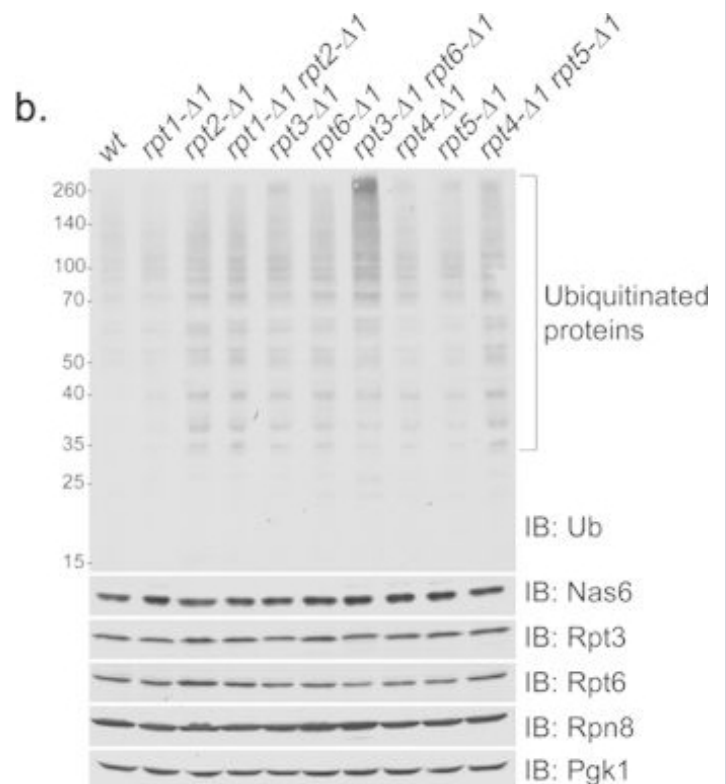
Manuals, SDS & CofA

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The Rpt6 tail exhibits a distinct functional relationship with Nas6 in vivo. (a) Phenotypic analysis showing effect of *nas6Δ* on the growth of *rpt6-Δ1* or *rpt3-Δ1* single, or double mutants. Four-fold serial dilutions of indicated cells were spotted onto YPD plates, synthetic complete medium (SC), or SC medium containing canavanine (1  $\mu$ g/ml), and incubated for 2–3 days at the indicated temperature. For testing sensitivity to canavanine (an arginine analog), arginine was omitted from the SC medium. (b) Effect of *nas6Δ* on the degradation of polyubiquitinated proteins in *rpt6-Δ1* or *rpt3-Δ1* single, or double mutant cells. The cells were cultured for 6 hours at 37 °C. Whole cell lysates (20  $\mu$ g) were subjected to 10% Bis-Tris SDS-PAGE for immunoblotting (IB) of polyubiquitinated proteins, and 12% SDS-PAGE for immunoblotting of Nas6 and proteasome subunits. Rpt3 and Rpt6 are base subunits. Rpn8 is a lid subunit. Pgk1 serves as a loading control. Lighter exposure of anti-ubiquitin (Ub) immunoblot is shown at right to further illustrate the difference in polyubiquitinated protein levels. Molecular weight markers are at left in kDa.

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Together, the Rpt3 and Rpt6 tails play a central role in proteasome function. (a) Yeast growth assay showing severe heat sensitivity of *rpt3-Δ1**rpt6-Δ1* double mutant cells. Four-fold serial dilutions of indicated yeast strains were spotted onto YPD plates and grown for 2–3 days at 30 °C and 37 °C. Table 1 lists the yeast strains used in each figure henceforth. (b) Anti-ubiquitin immunoblots showing an accumulation of polyubiquitinated proteins in *rpt3-Δ1**rpt6-Δ1* cells. Levels of the Nas6 chaperone and proteasome subunits remained largely unchanged in all indicated strains. Whole cell lysates (20  $\mu$ g) were subjected to 10% Bis-Tris SDS-PAGE for immunoblotting (IB) of polyubiquitinated proteins, and 12% Tris-Glycine SDS-PAGE (SDS-PAGE henceforth) for immunoblotting of Nas6 and proteasome subunits. Nas6 is a cognate chaperone of Rpt3. Rpt3 and Rpt6 are base subunits. Rpn8 is a lid subunit. Pgk1 serves as a loading control. Ub is ubiquitin. Molecular weight markers are at left in kDa.

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## Handling & Storage

<b>Use/Stability</b>	Stable for at least 1 year after receipt when stored at -20°C.
<b>Handling</b>	Avoid freeze/thaw cycles. After opening, prepare aliquots and store at -20°C.
<b>Short Term Storage</b>	-20°C
<b>Long Term Storage</b>	-20°C
<b>Shipping</b>	Blue Ice

**Regulatory Status** RUO - Research Use Only

## Product Details

<b>Application</b>	IHC, IP, WB
<b>Application Notes</b>	Clone P4D1 has been reported to be of utility in immunoprecipitation, immunofluorescence and immunohistochemistry (see Brady et al. (2005); Wang et al. (2008); Ito et al. (2003) respectively).
<b>Clone</b>	P4D1
<b>Formulation</b>	Liquid. In PBS containing 0.01% sodium azide.
<b>Host</b>	Mouse
<b>Immunogen</b>	Denatured bovine ubiquitin.
<b>Isotype</b>	IgG1
<b>Purity Detail</b>	Protein G affinity purified from cell culture media.
<b>Recommendation Dilutions/Conditions</b>	Western Blot (1:1,000) Suggested dilutions/conditions may not be available for all applications. Optimal conditions must be determined individually for each application.
<b>Source</b>	Purified from hybridoma tissue culture supernatant.
<b>Species Reactivity</b>	Species independent

## Specificity

Recognizes mono- and poly-ubiquitin protein conjugates, free polyubiquitin chains and free ubiquitin.

## Technical Info / Product Notes

The ubiquitin antibody BML-PW0930 (clone P4D1) was developed using a denatured glutaraldehyde cross-linked ubiquitin IgG complex as the immunogen. Monoclonal antibody was purified from tissue culture supernatant by ion exchange chromatography. The general ubiquitin reactivity of the monoclonal antibody has been demonstrated by Western blotting using synthetic ubiquitin chains, single isopeptide-linked polyubiquitin chains, and with endogenously ubiquitinated species in cell lysates.

## UniProt ID

P0CG53 (UBB), P0CH28 (UBC), P62992 (RPS27A), P63048 (UBA52)

## Worry-free Guarantee

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