

#9643 Store at -20C

## PA28 $\alpha$ (D1C10) Rabbit mAb


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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	28	Rabbit IgG	#Q06323	5720

### Product Usage Information

#### Application

 Western Blotting  
Immunoprecipitation

#### Dilution

 1:1000  
1:100

### Storage

 Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.

### Specificity / Sensitivity

 PA28 $\alpha$  recognizes endogenous levels of total PA28 $\alpha$  protein. This antibody does not cross-react with either PA28 $\beta$ /PSME2 or PA28 $\gamma$ /PSME3.

### Species predicted to react based on 100% sequence homology:

Bovine, Dog, Pig

### Source / Purification

 Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human PA28 $\alpha$  protein.

### Background

The 20S proteasome is the major proteolytic enzyme complex involved in intracellular protein degradation. PA700, PA28, and PA200 are three major protein complexes that function as activators of the 20S proteasome. There are three evolutionarily conserved subunits of PA28: PA28 $\alpha$  (PSME1), PA28 $\beta$  (PSME2), and PA28 $\gamma$  (PSME3) (1,2). PA28 $\alpha$  and PA28 $\beta$  form a heteroheptameric complex and function by binding to the 20S complex at its opening site(s). The PA28 $\alpha$ / $\beta$  complex is present throughout the cell and participates in MHC class I antigen presentation by promoting the generation of antigenic peptides from foreign proteins (2). PA28 $\gamma$  exists in the form of a homoheptamer and is mainly located in the nucleus. The PA28 $\gamma$  complex exerts its function by binding and guiding specific nuclear target proteins to the 20S proteasome for further degradation (3,4).

### Background References

1. Dahlmann, B. (2005) *Essays Biochem.* 41, 31-48.
2. Rechsteiner, M. and Hill, C.P. (2005) *Trends Cell Biol.* 15, 27-33.
3. Zhou, P. (2006) *Cell* 124, 256-257.
4. Li, X. et al. (2006) *Cell* 124, 381-392.

### 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 **IP:** Immunoprecipitation

### 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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